

LOS ANGELES TO SAN DIEGO



**LOS ANGELES TO SAN DIEGO
VIA THE INLAND EMPIRE SECTION**
**PRELIMINARY ALTERNATIVES
ANALYSIS REPORT**

Presentation to
**California High-Speed
Rail Authority**
Board of Directors

March 3, 2011

**Preliminary Alternatives Analysis
Report**

**Los Angeles to San Diego
via the Inland Empire**

**Preliminary Alternatives
Analysis Report**

Now available at:

www.cahighspeedrail.ca.gov

LOS ANGELES TO SAN DIEGO

LOS ANGELES TO SAN DIEGO VIA INLAND EMPIRE SECTION



- 170-Mile Corridor**
 - ✓ 500 miles of Alternatives
- 8 Stations**
 - ✓ 24 candidate sites
- 3 Caltrans Districts**
 - ✓ Districts 7, 8 and 11
 - ✓ Unique interface opportunity
- 4 Counties (TWG per county)**
 - ✓ Los Angeles, San Bernardino, Riverside, San Diego
- Nearly 100 Cities**
- Alignments run through:**
 - ✓ 19 Congressional Districts
 - ✓ 23 State Senate
 - ✓ 31 State Assembly



Southern California Inland Corridor Group (MOU Partners)



Riverside County Transportation Commission



**Governments
SANBAG
Working Together**

CHSRA BOARD MEETING FEBRUARY, 2010

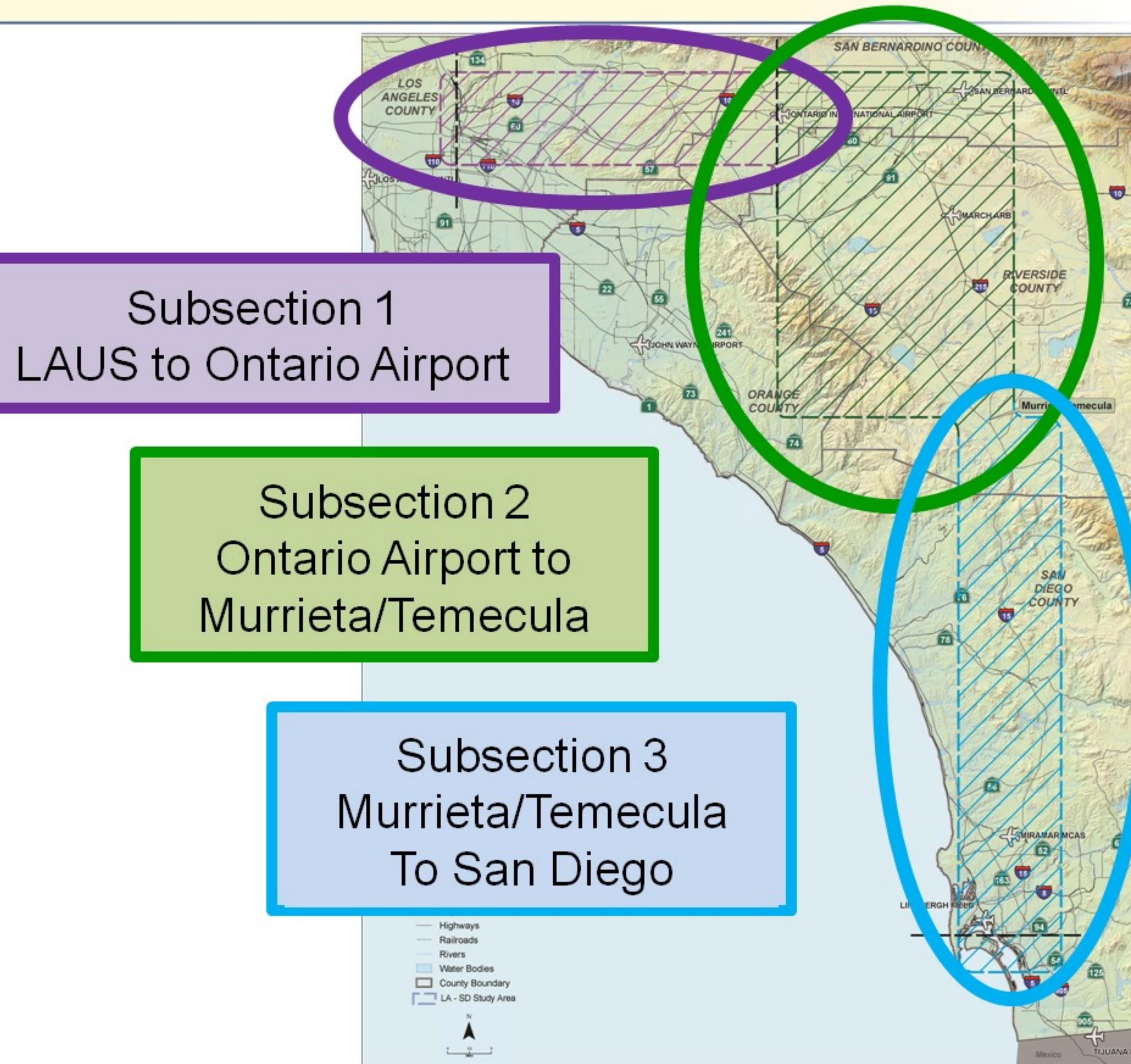


- Reviewed Draft Scoping Report with Board
- Regional support for addition of I-10 alternative and San Gabriel Valley El Monte Station
- Proposed I-10 alternative emulates Regional High Speed Transport Studies along corridor
- Regional support in San Diego for additional alternatives



CA HSR Los Angeles to San Diego
via the Inland Empire Section
Alternative Alignments Identified
During Scoping Process
Note:
1. Developed with Technical Working Group Input

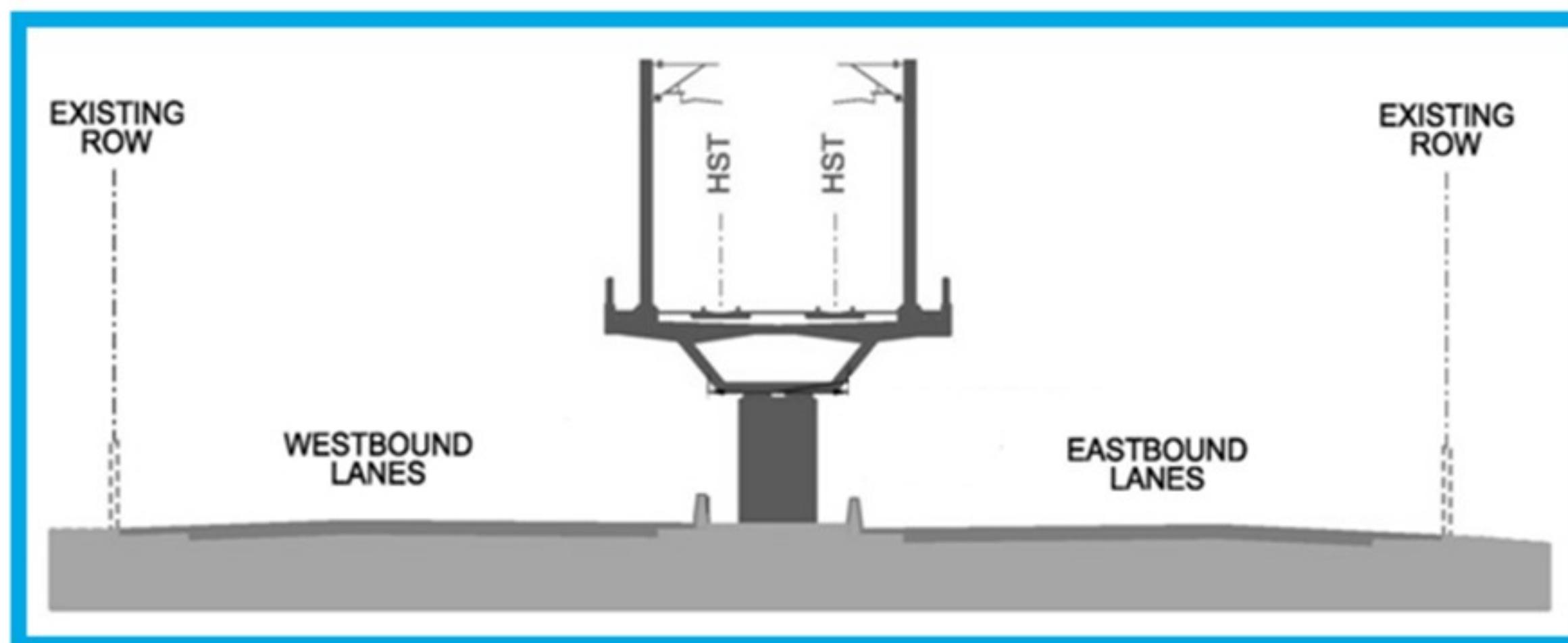
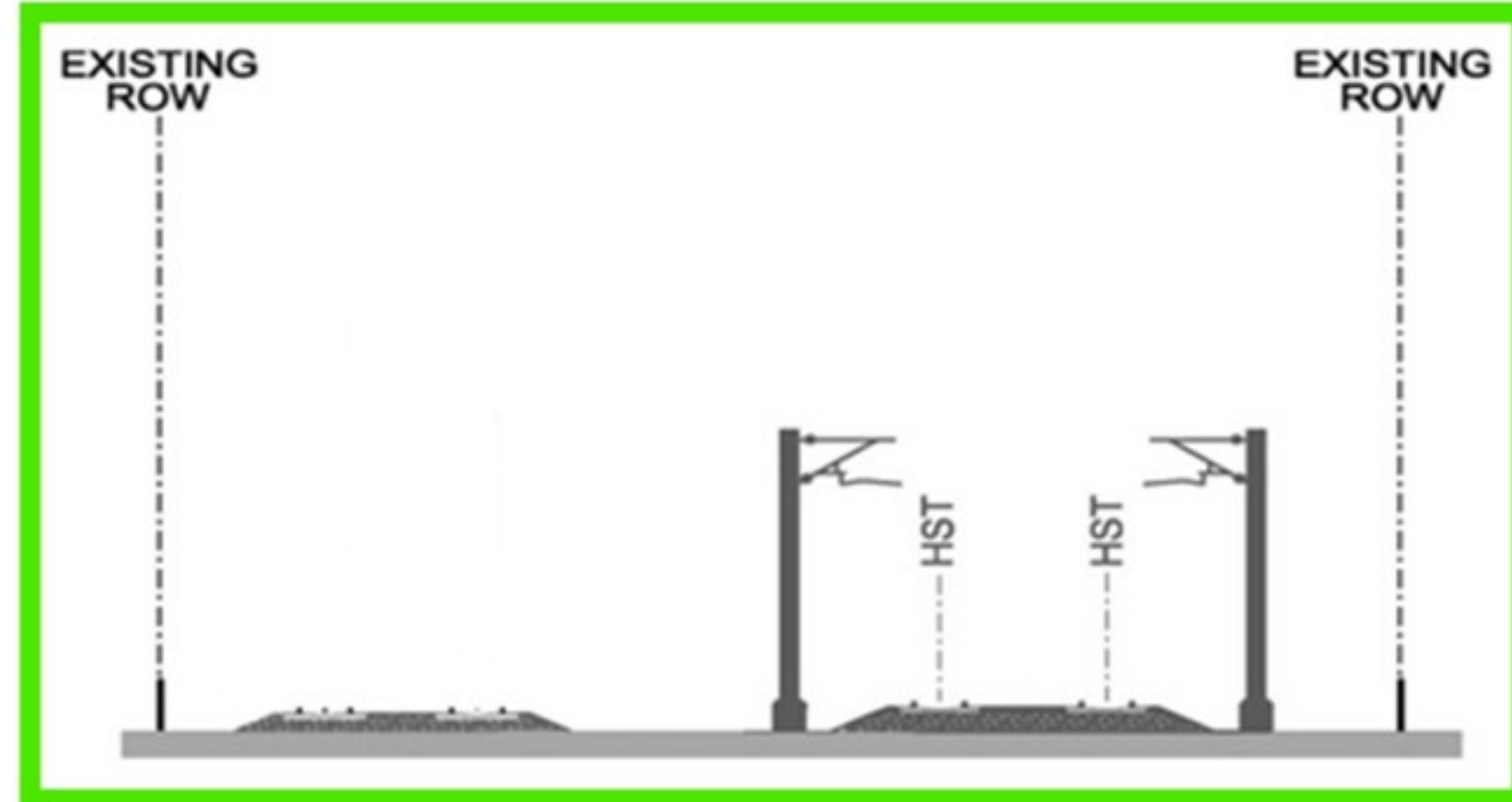
PROJECT STUDY AREA: SUBSECTIONS



TYPICAL SECTIONS



- **At-Grade**

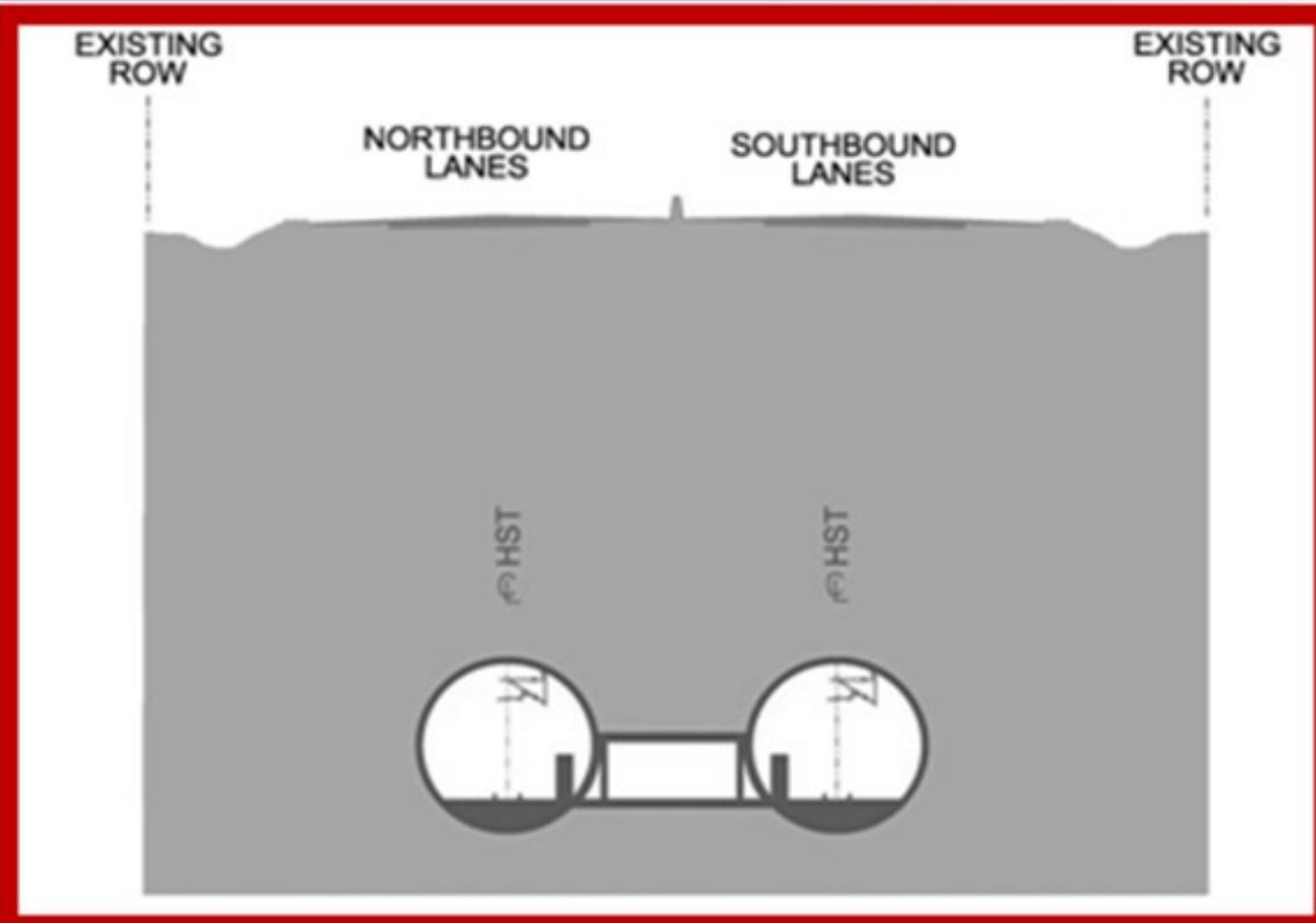


- **Above Grade Structure**

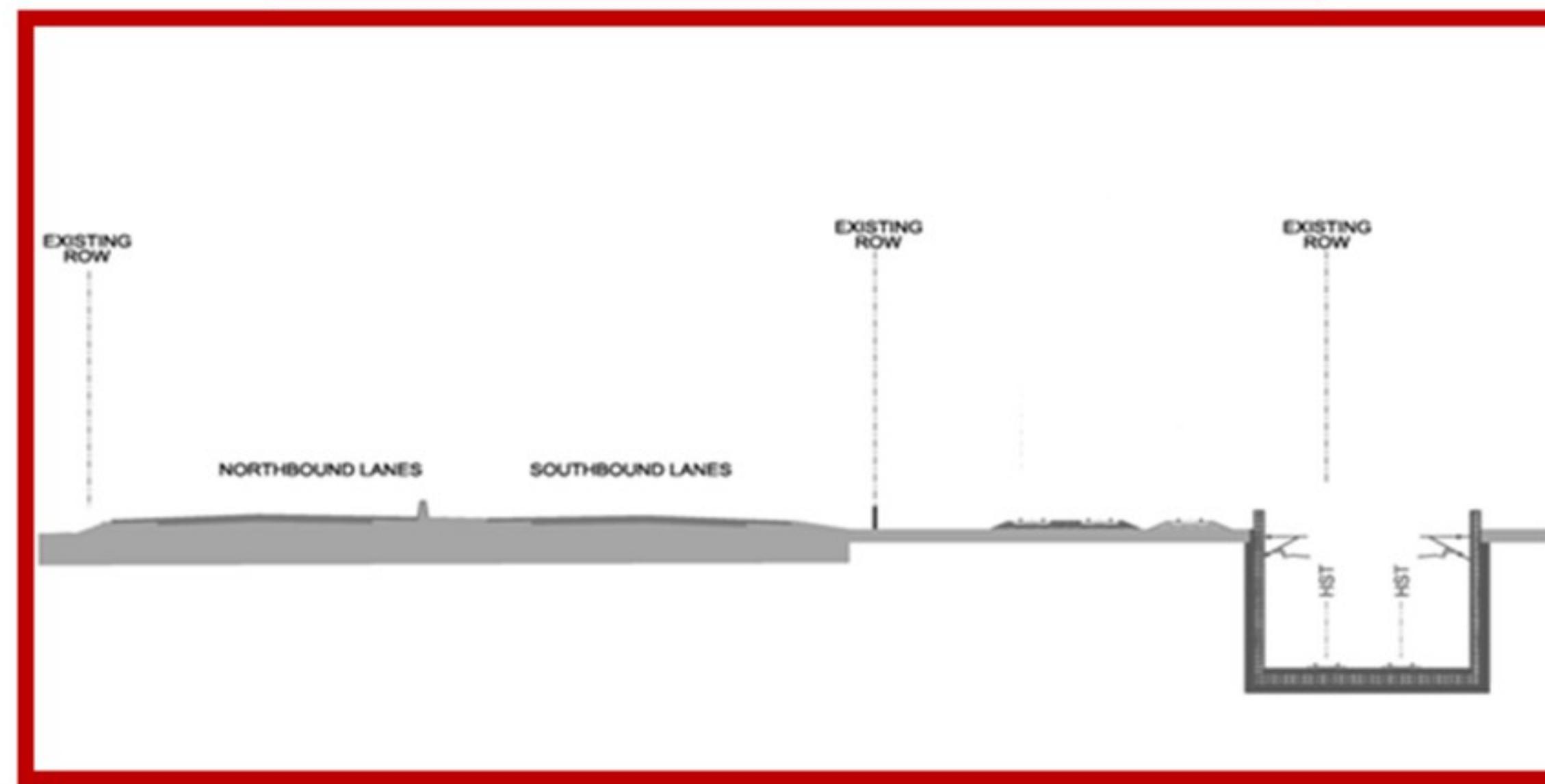
TYPICAL SECTIONS BELOW GRADE OPTIONS



- **Bored-Tunnel**

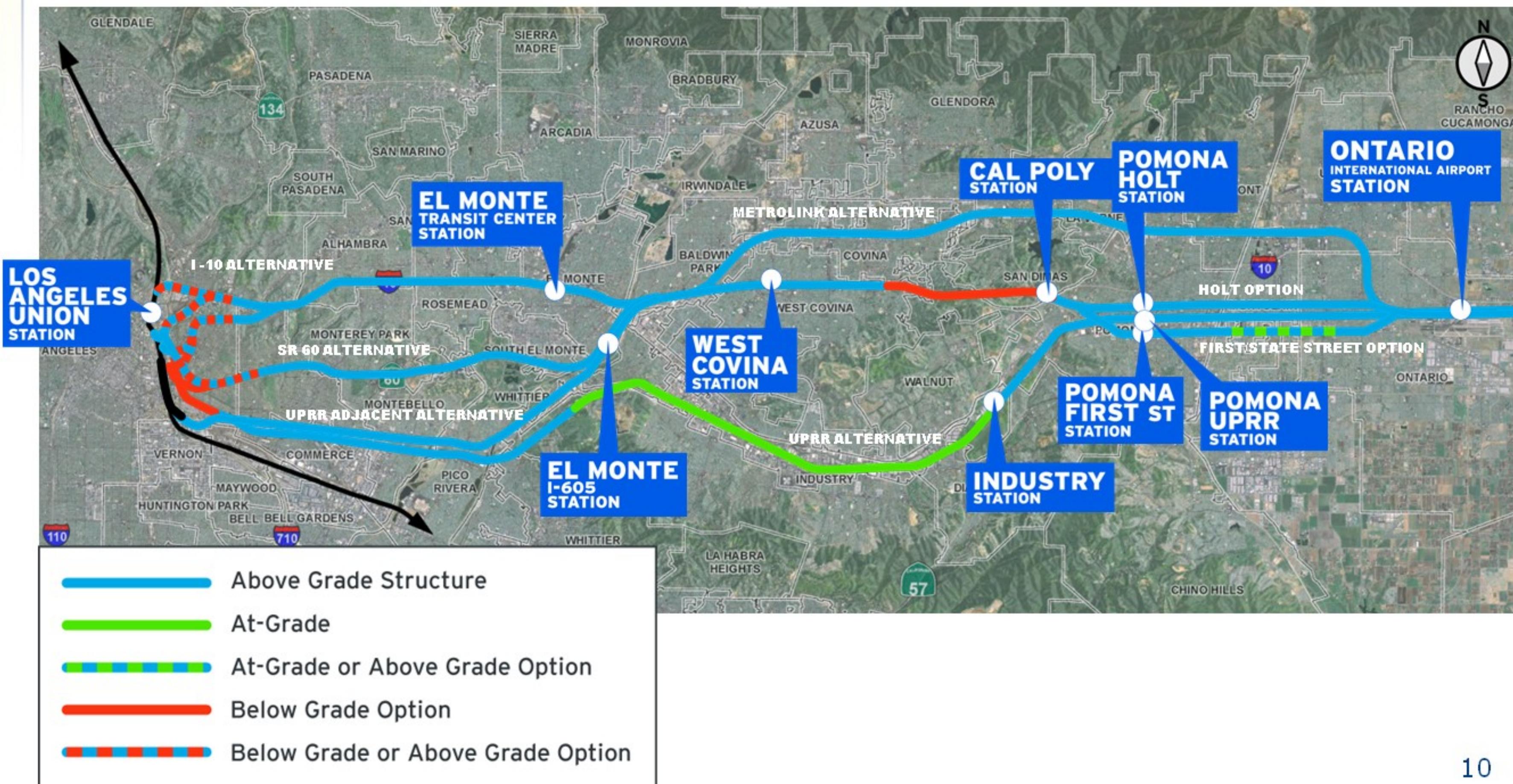


- **Trench**



SUBSECTION 1

Los Angeles to Ontario International Airport



SUBSECTION 1

Los Angeles to Ontario International Airport



RECOMMENDED FOR WITHDRAWAL:

S1-A3: UNION PACIFIC RAILROAD (UPRR)

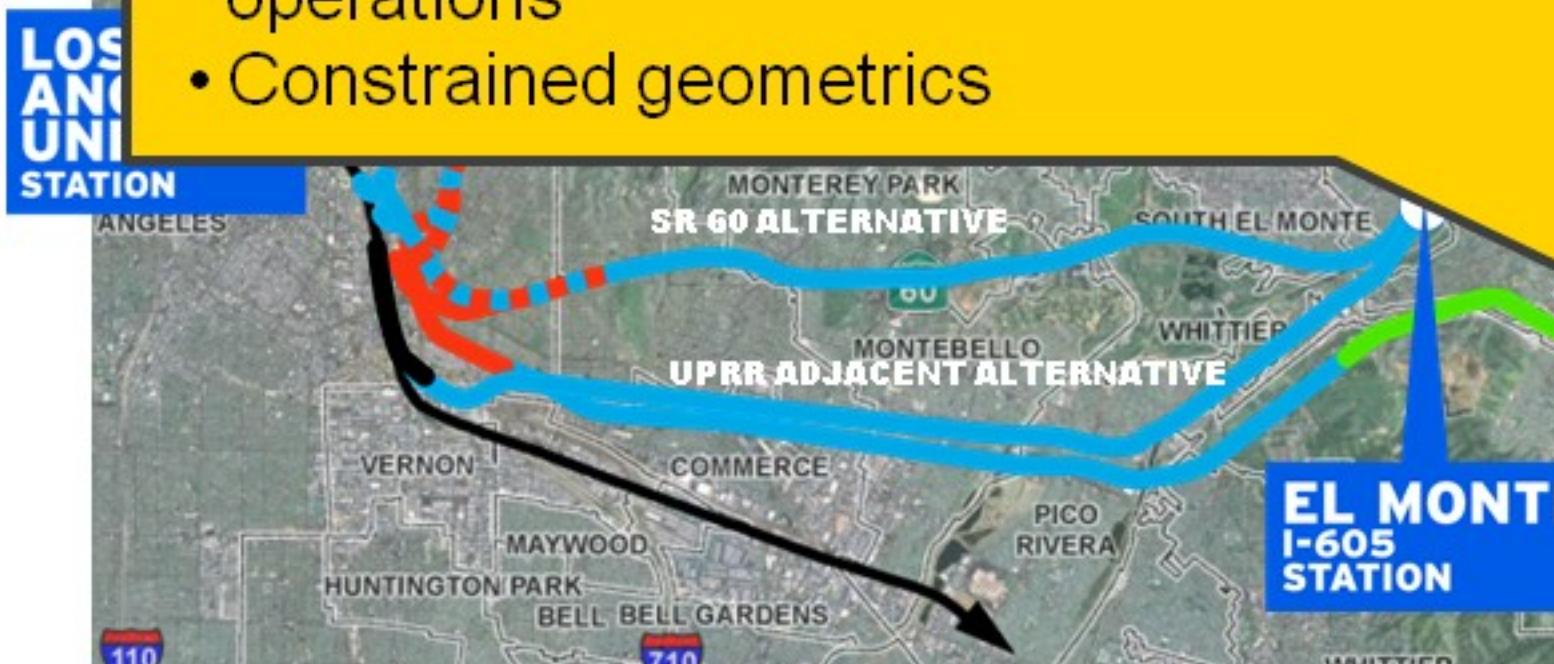
- UPRR operational and capacity constraints affecting critical freight rail corridor
- High disruption of industrial uses associated with UPRR operations
- Constrained geometrics

Industry Station Option

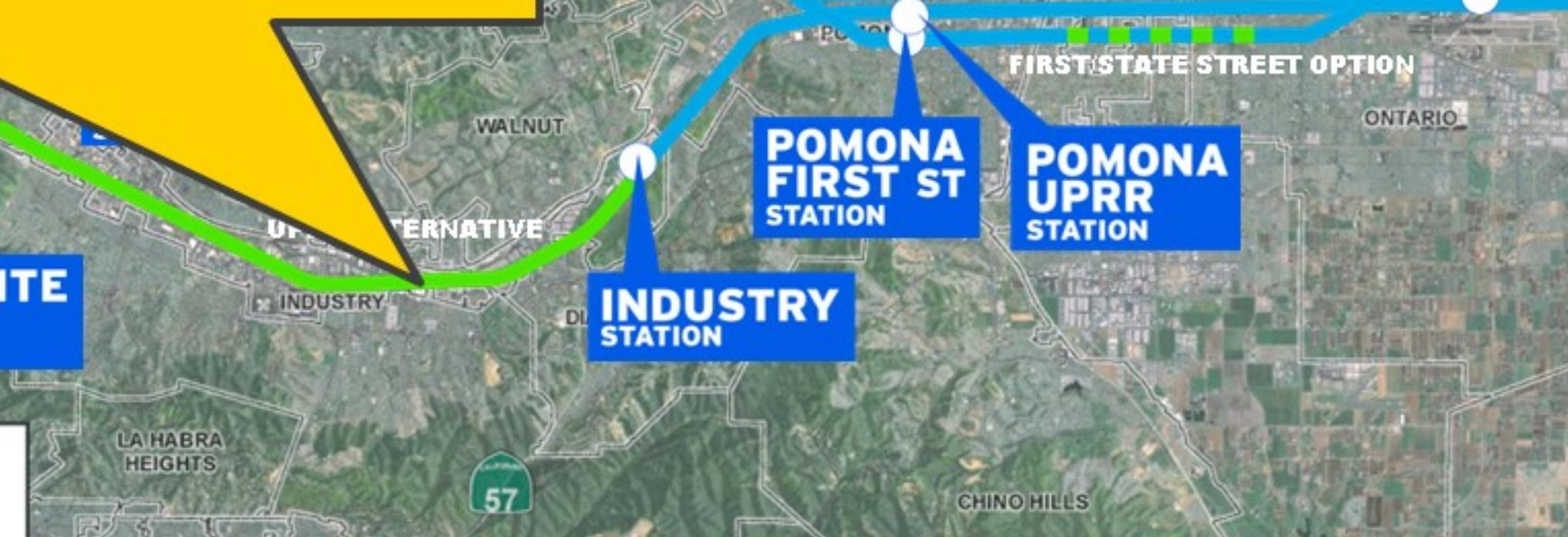
- Alignment alternative for this station was withdrawn.

Pomona/UPRR Station Option

- Alignment alternative for this station was withdrawn.



- Above Grade Structure**: Blue line
- At-Grade**: Green line
- At-Grade or Above Grade Option**: Blue and green dashed line
- Below Grade Option**: Red line
- Below Grade or Above Grade Option**: Red and blue dashed line



SUBSECTION 1

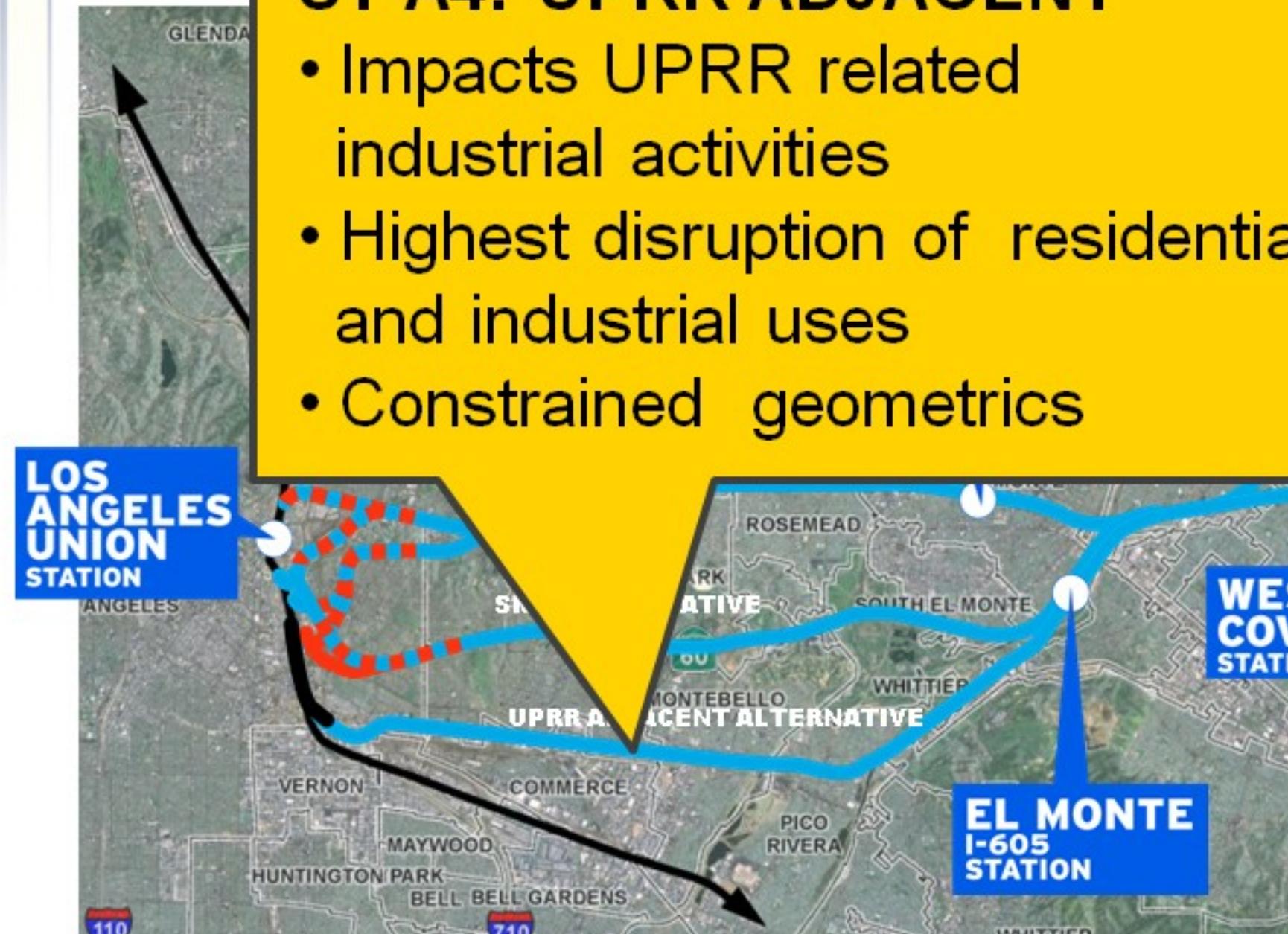
Los Angeles to Ontario International Airport



RECOMMENDED FOR WITHDRAWAL:

S1-A4: UPRR ADJACENT

- Impacts UPRR related industrial activities
- Highest disruption of residential and industrial uses
- Constrained geometrics



- Above Grade Structure
- At-Grade
- At-Grade or Above Grade Option
- Below Grade Option
- Below Grade or Above Grade Option

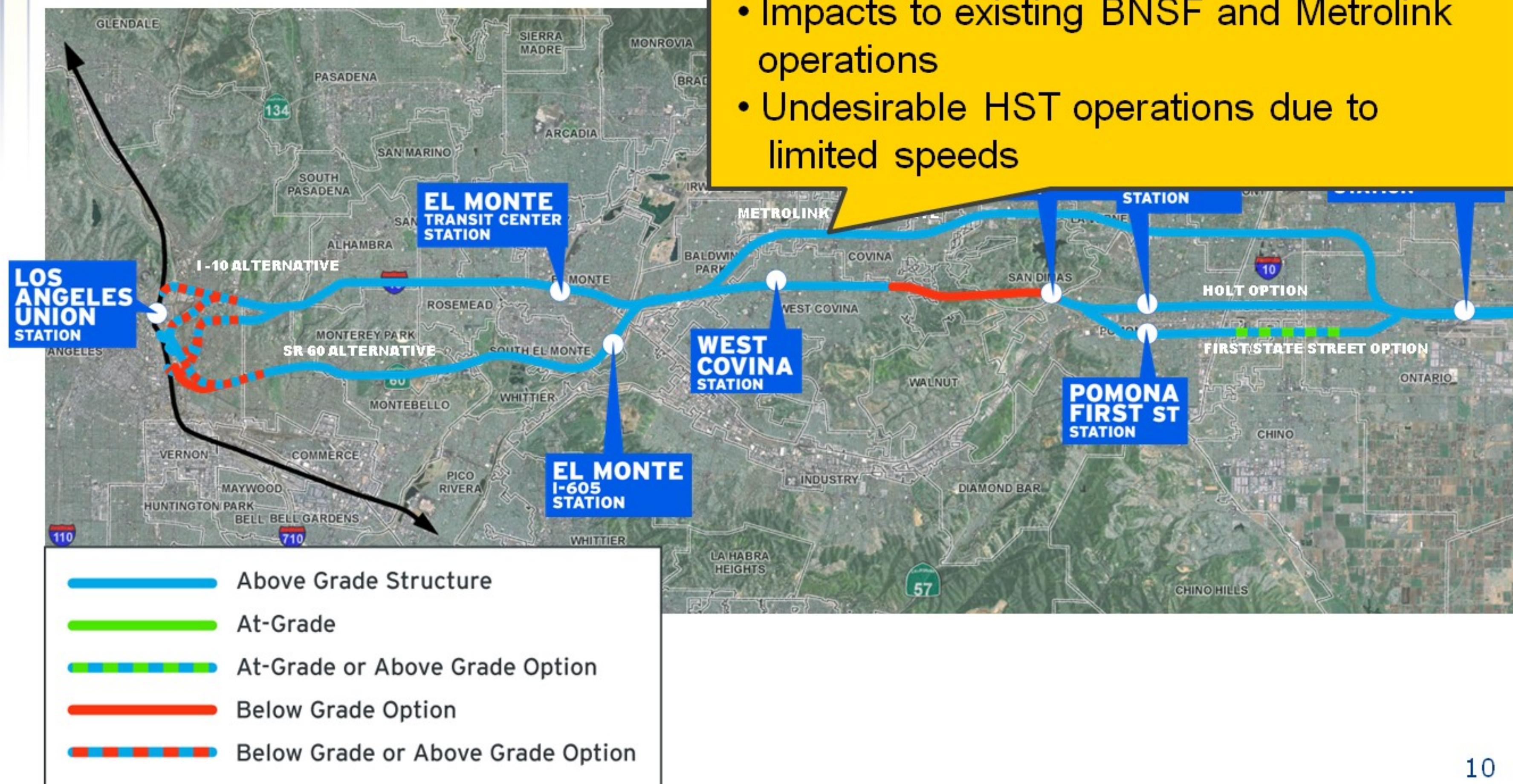


SUBSECTION 1 **Los Angeles to Ontario Intern**

RECOMMENDED FOR WITHDRAWAL:

S1-A5: METROLINK TO ONTARIO

- High disruption to residential uses including historic district in City of Claremont
- Highly constrained Metrolink ROW
- Impacts to existing BNSF and Metrolink operations
- Undesirable HST operations due to limited speeds



SUBSECTION 1

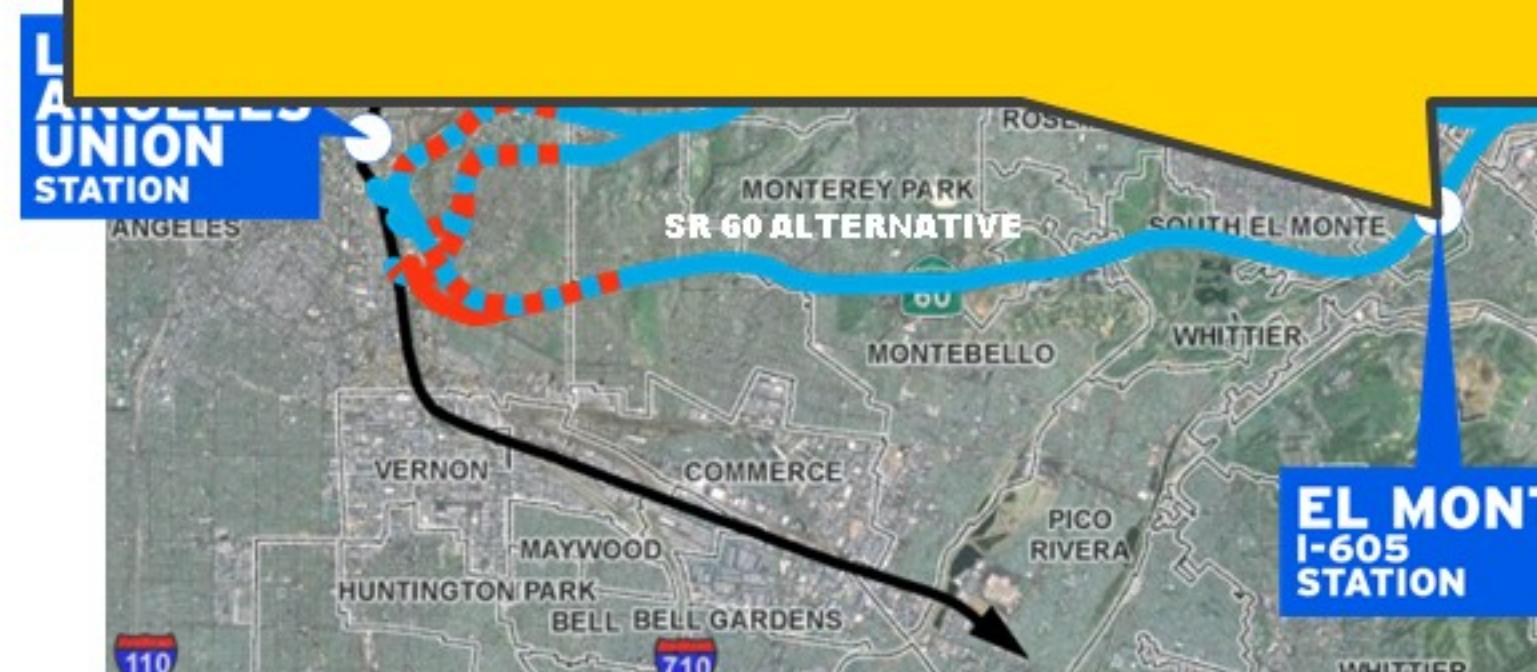
Los Angeles to Ontario International Airport



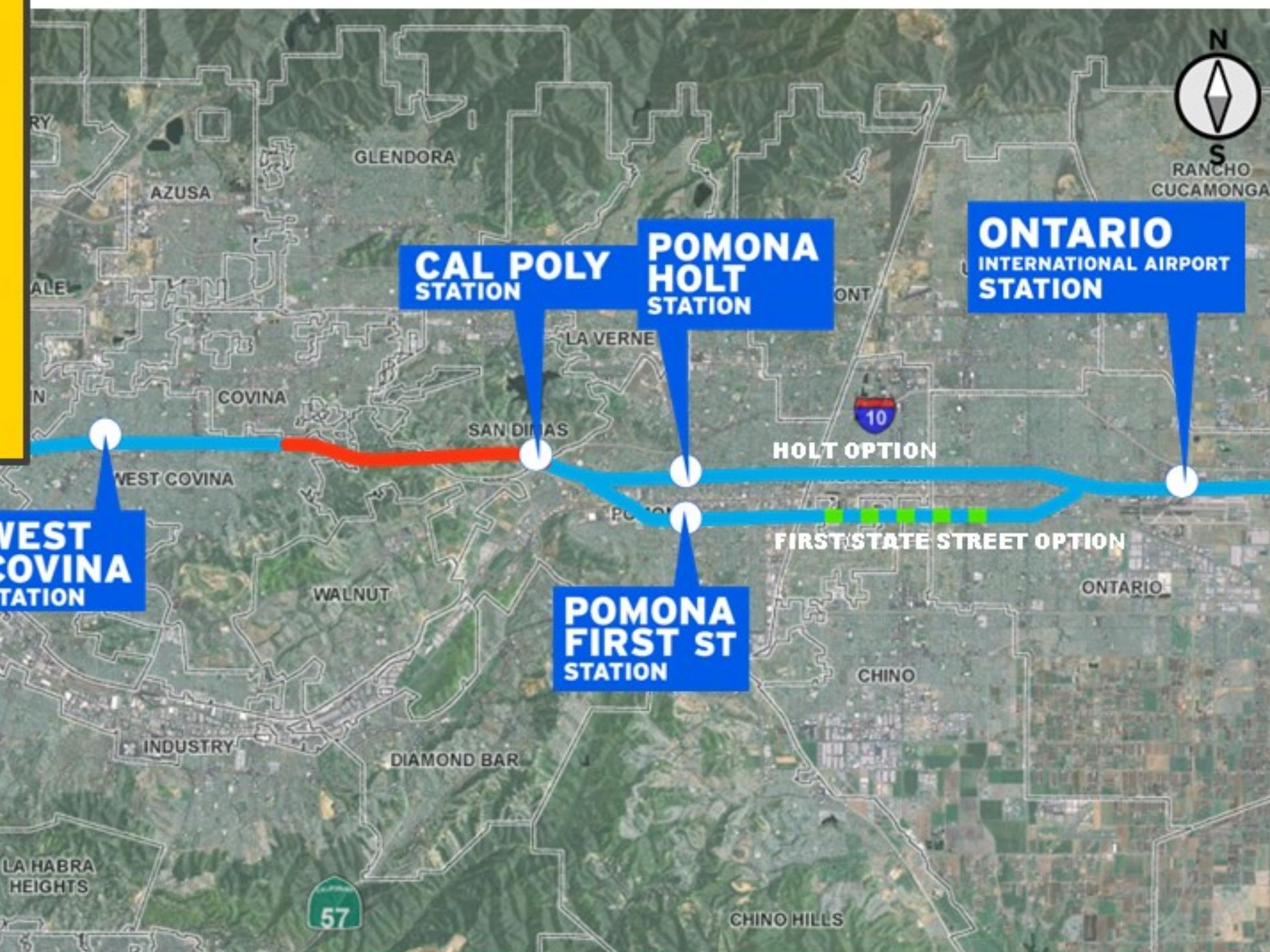
RECOMMENDED FOR WITHDRAWAL:

El Monte I-605 Station Option

- Station site not close to urban center
- No major intermodal connection.
- Encroachment on the Rio Hondo River channel



- Above Grade Structure
- At-Grade
- At-Grade or Above Grade Option
- Below Grade Option
- Below Grade or Above Grade Option



SUBSECTION 1

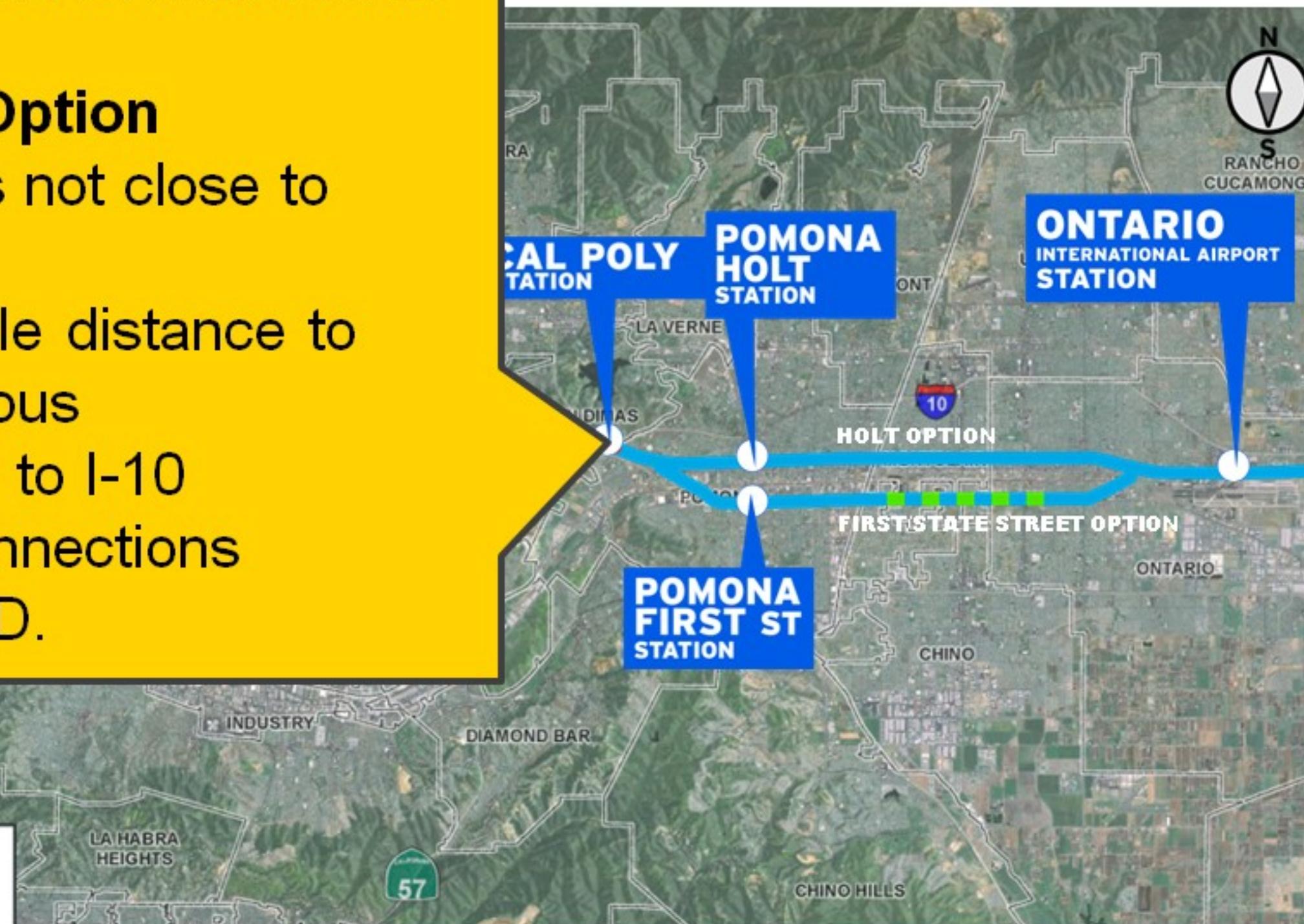
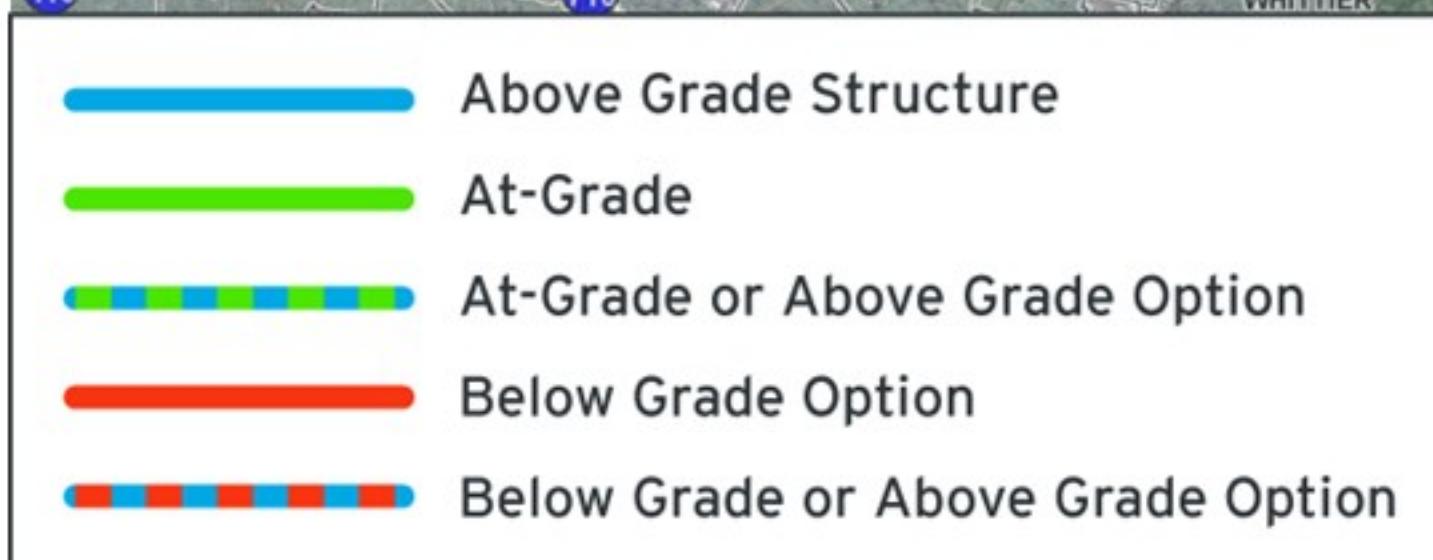
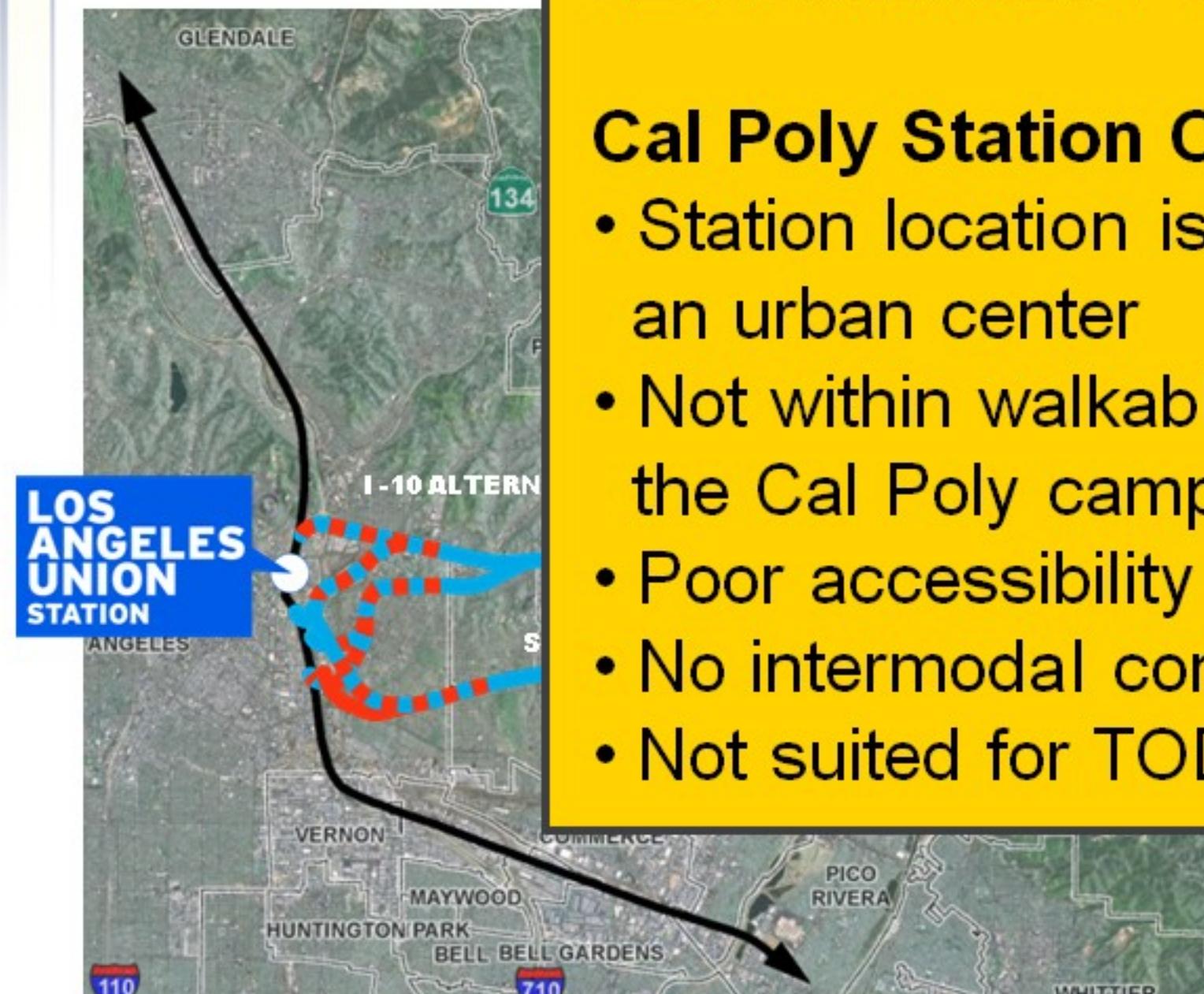
Los Angeles to Ontario International Airport



RECOMMENDED FOR WITHDRAWAL:

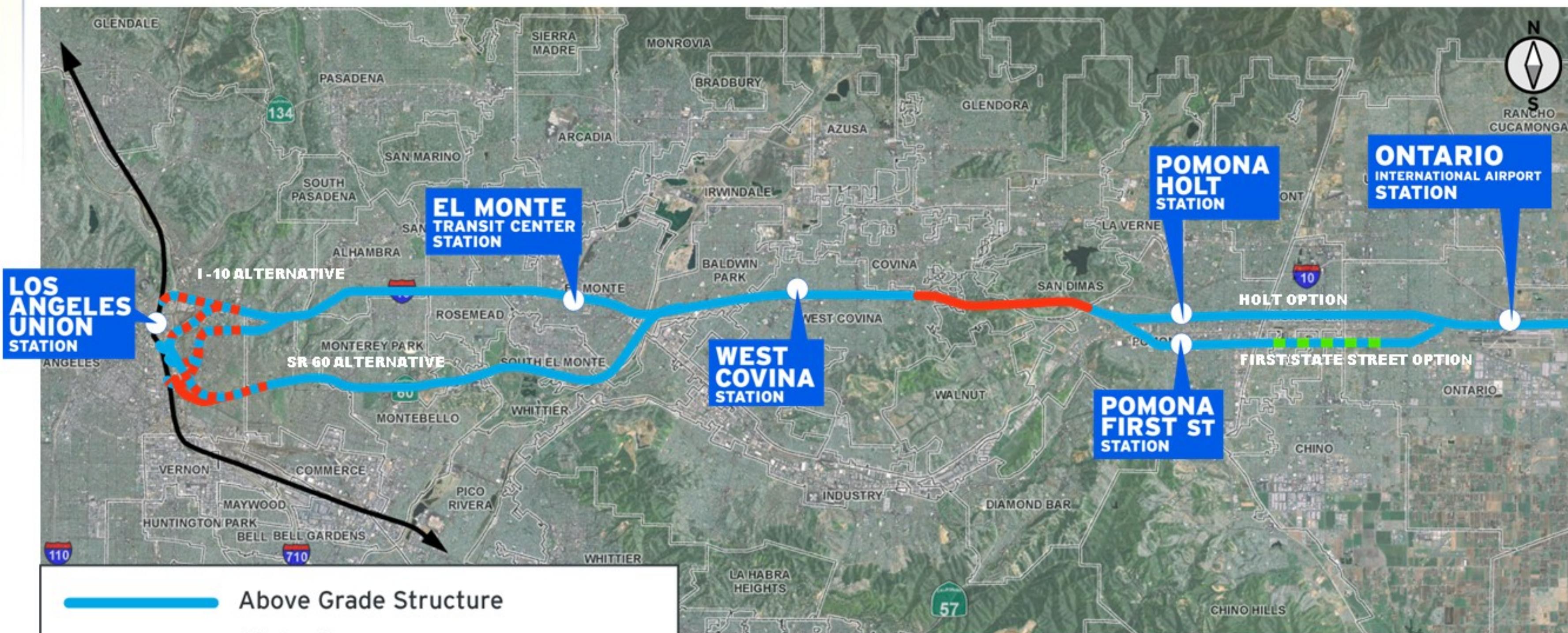
Cal Poly Station Option

- Station location is not close to an urban center
- Not within walkable distance to the Cal Poly campus
- Poor accessibility to I-10
- No intermodal connections
- Not suited for TOD.



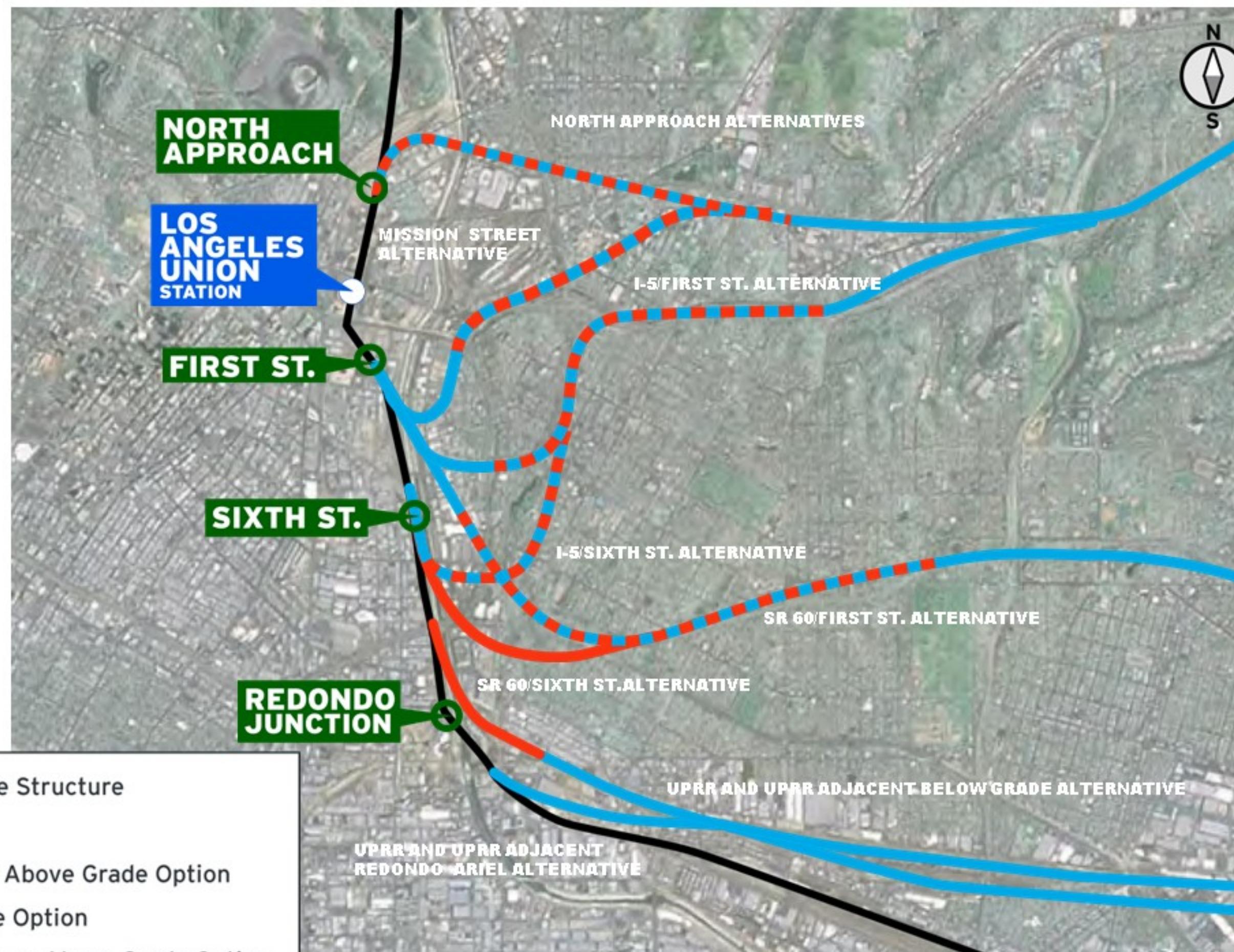
SUBSECTION 1

Los Angeles to Ontario International Airport



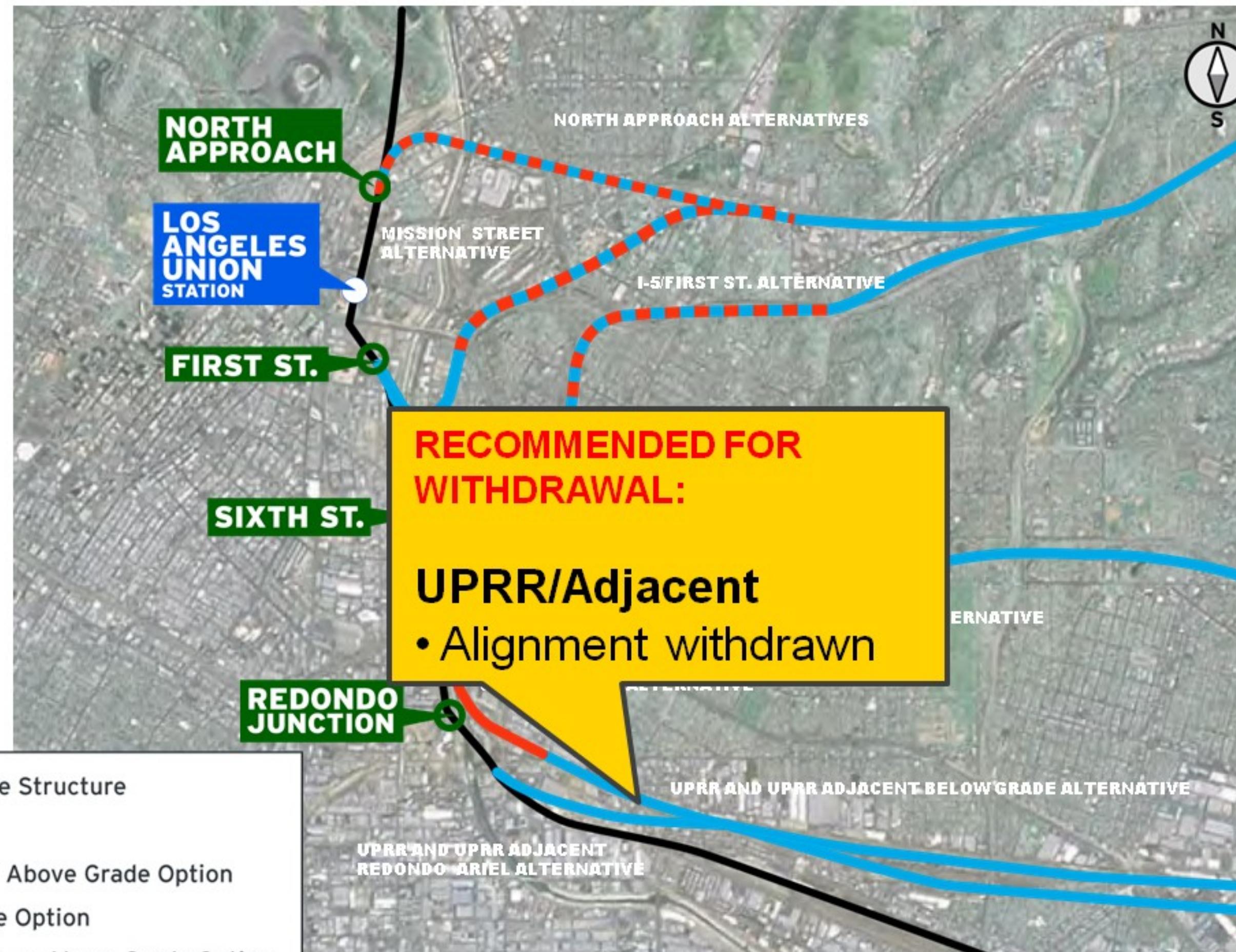
- Above Grade Structure
- At-Grade
- At-Grade or Above Grade Option
- Below Grade Option
- Below Grade or Above Grade Option

LOS ANGELES APPROACHES AND CONNECTIONS



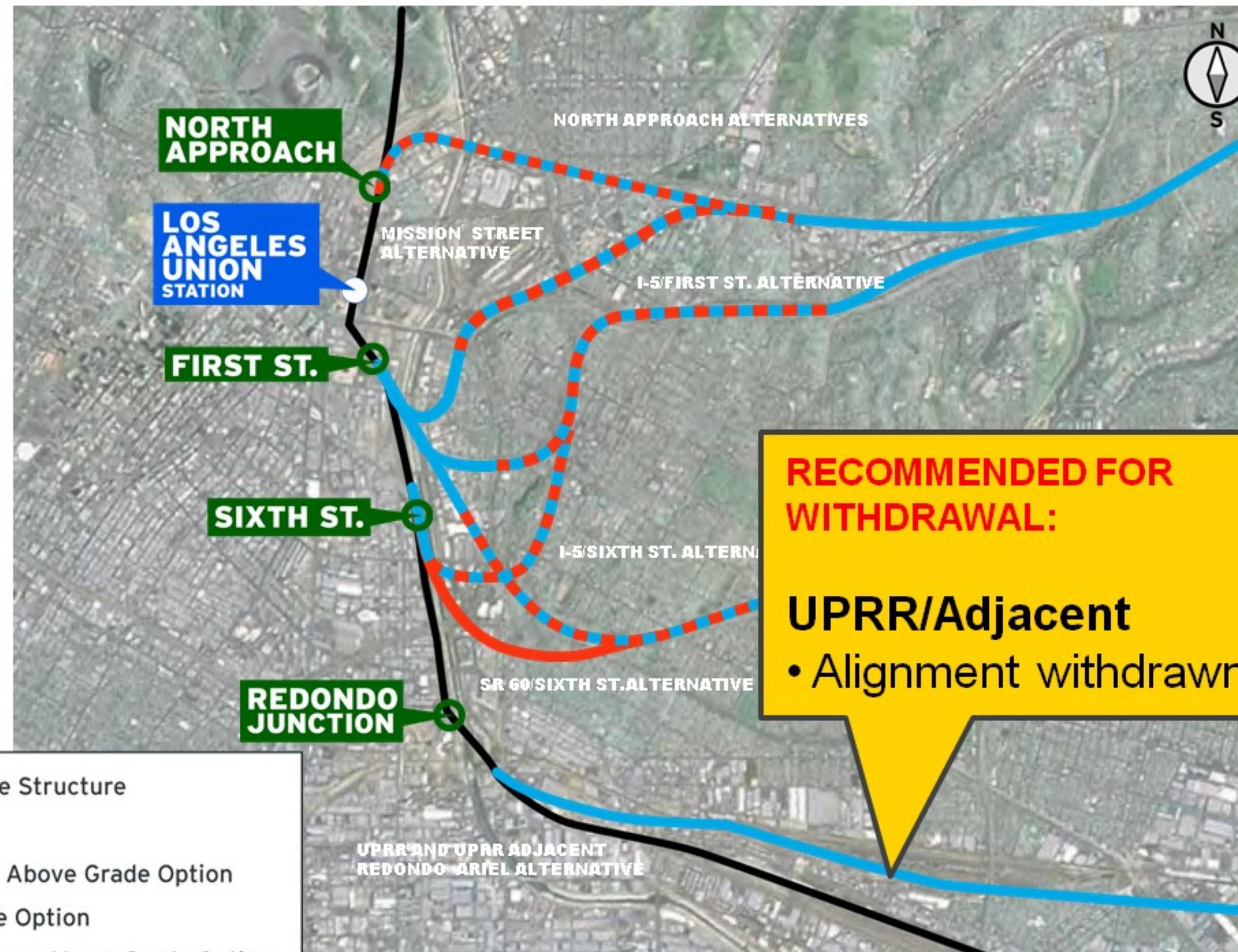
- Above Grade Structure
- At-Grade
- At-Grade or Above Grade Option
- Below Grade Option
- Below Grade or Above Grade Option
- Potential Connection Point

LOS ANGELES APPROACHES AND CONNECTIONS



- Above Grade Structure
- At-Grade
- At-Grade or Above Grade Option
- Below Grade Option
- Below Grade or Above Grade Option
- Potential Connection Point

LOS ANGELES APPROACHES AND CONNECTIONS



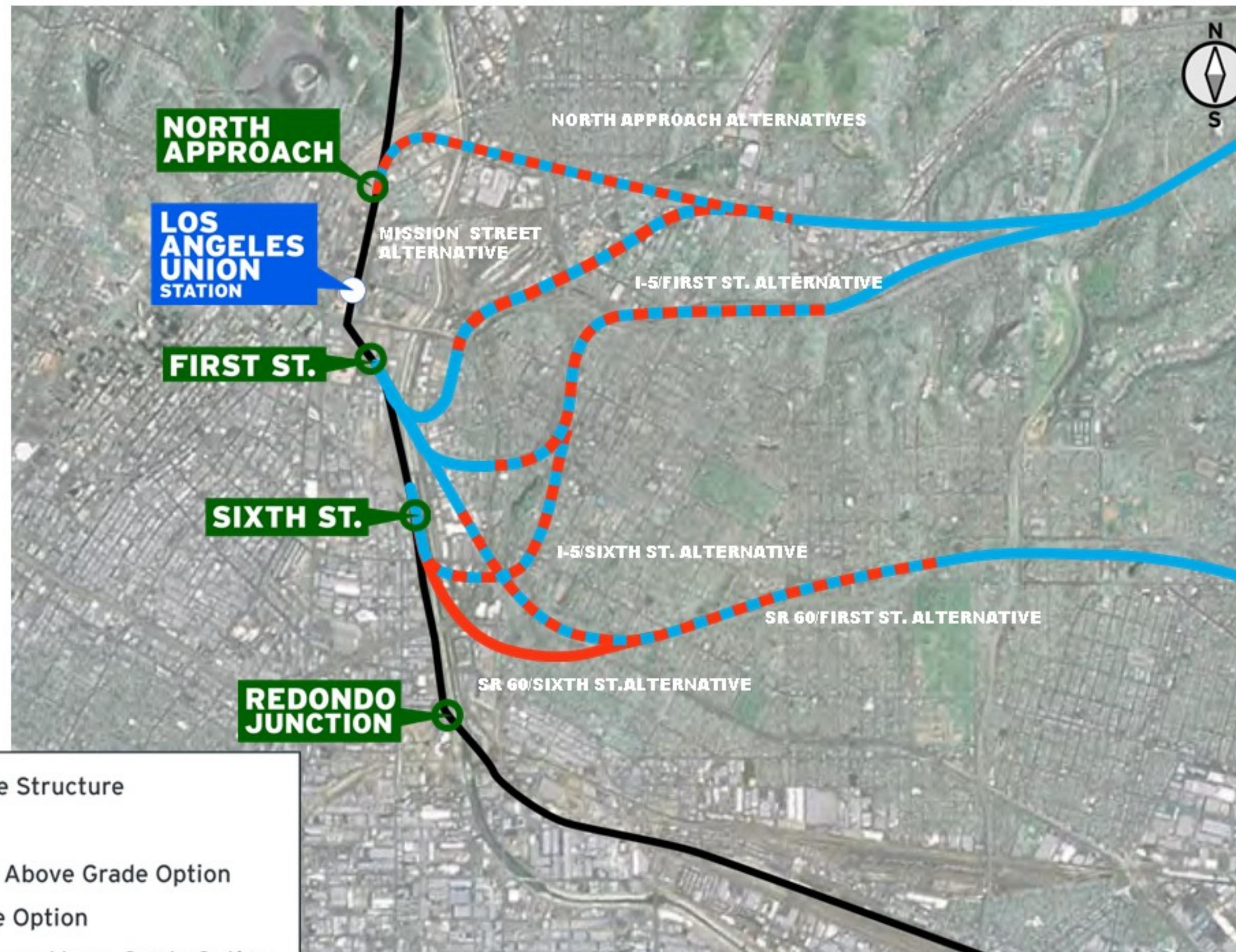
**RECOMMENDED FOR
WITHDRAWAL:**

UPRR/Adjacent

- Alignment withdrawn

- Above Grade Structure
- At-Grade
- At-Grade or Above Grade Option
- Below Grade Option
- Below Grade or Above Grade Option
- Potential Connection Point

LOS ANGELES APPROACHES AND CONNECTIONS



SUBSECTION 2

Ontario International Airport to Murrieta/Temecula



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Ontario International Airport to Murrieta/Temecula



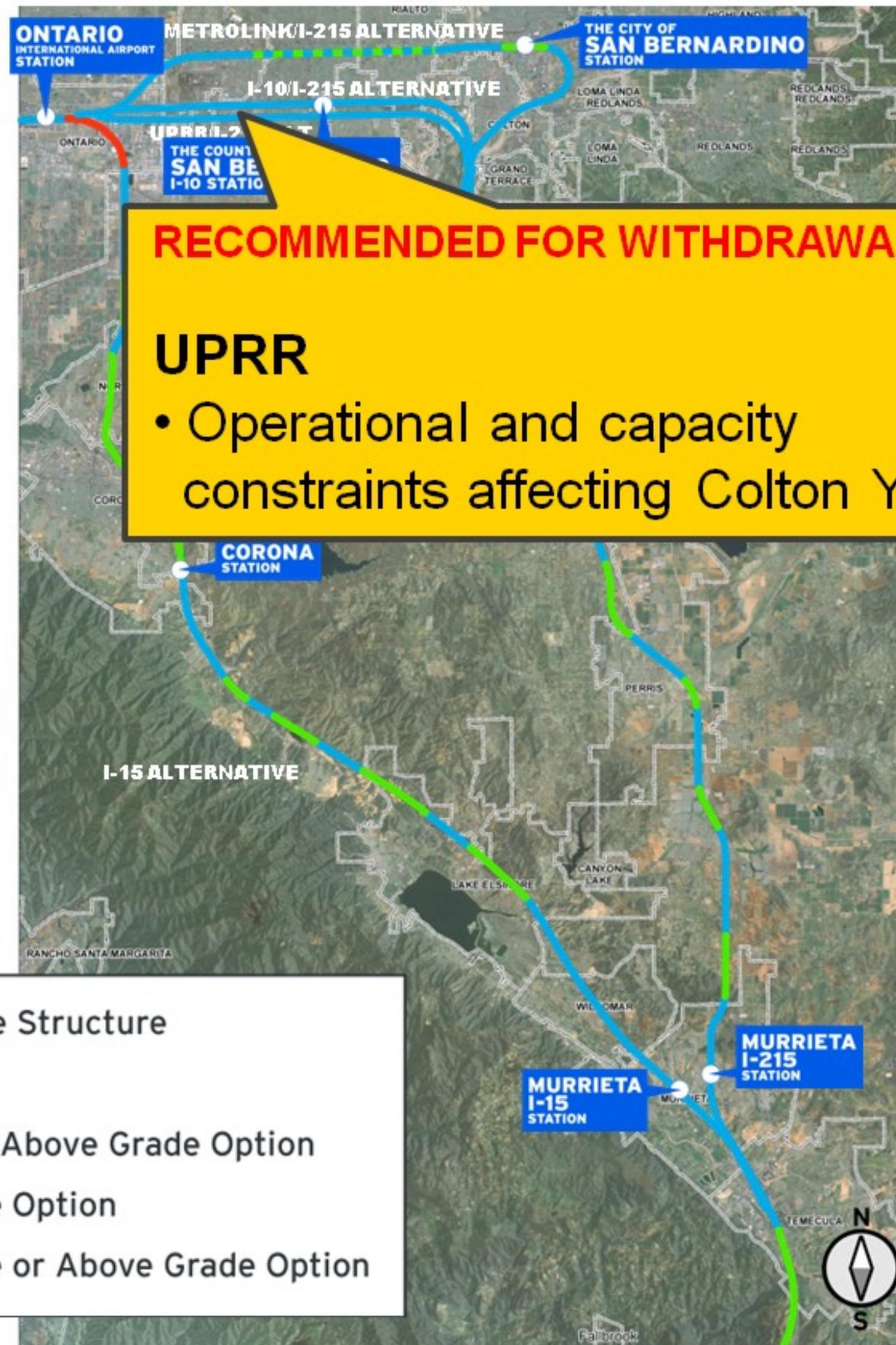
RECOMMENDED FOR WITHDRAWAL:

I-15 Corridor - Milliken/Hamner to Corona (A4.1)

- Affects an existing parcel conserved with Section 6(f) funds for the federally endangered Delhi Sands flower-loving fly

SUBSECTION 2

Ontario International Airport to Murrieta/Temecula



SUBSECTION 2

Ontario International Airport to Murrieta/Temecula



RECOMMENDED FOR WITHDRAWAL:

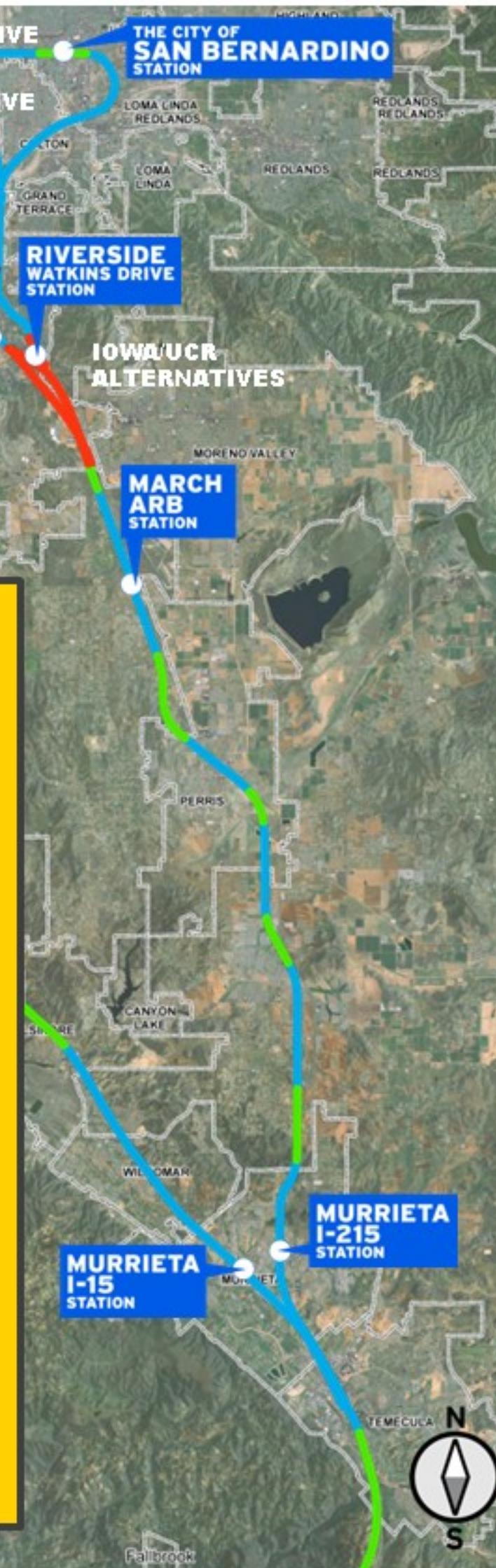
IAWA/UCR ALIGNMENTS

IAWA

- Higher impacts on residential, commercial, and industrial uses
- Iowa Avenue alternative is off the I-215 Freeway for a longer distance

UCR

- Not consistent with UC Riverside Master Plan



SUBSECTION 2

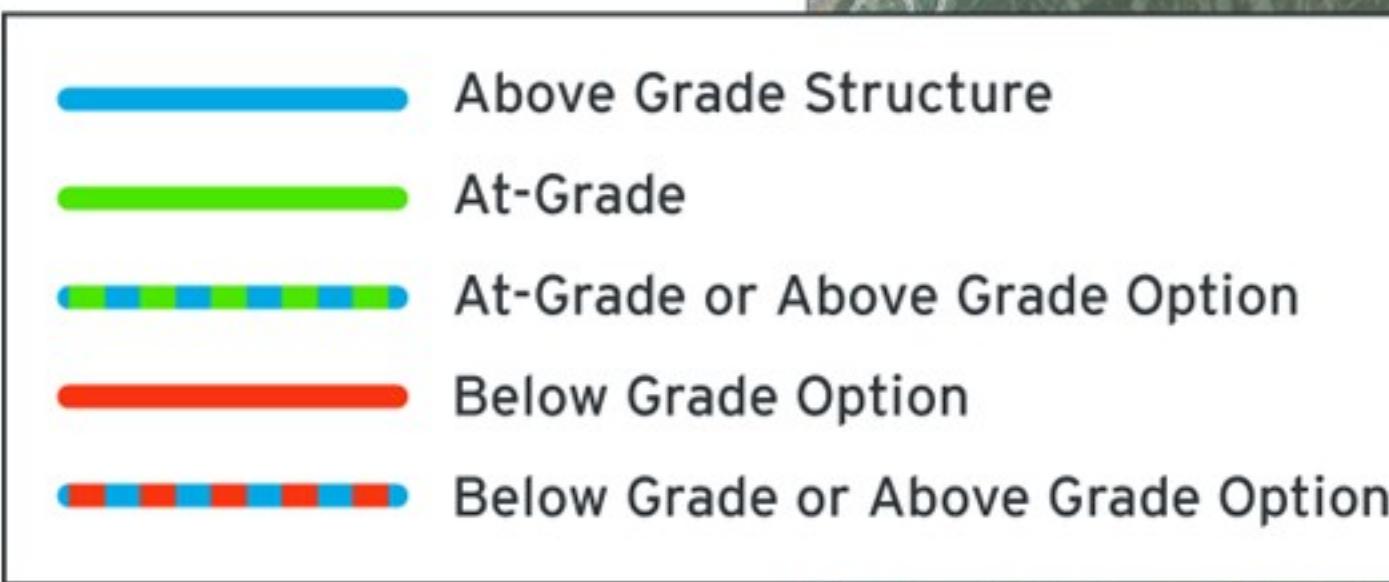
Ontario International Airport to Murrieta/Temecula



RECOMMENDED FOR WITHDRAWAL:

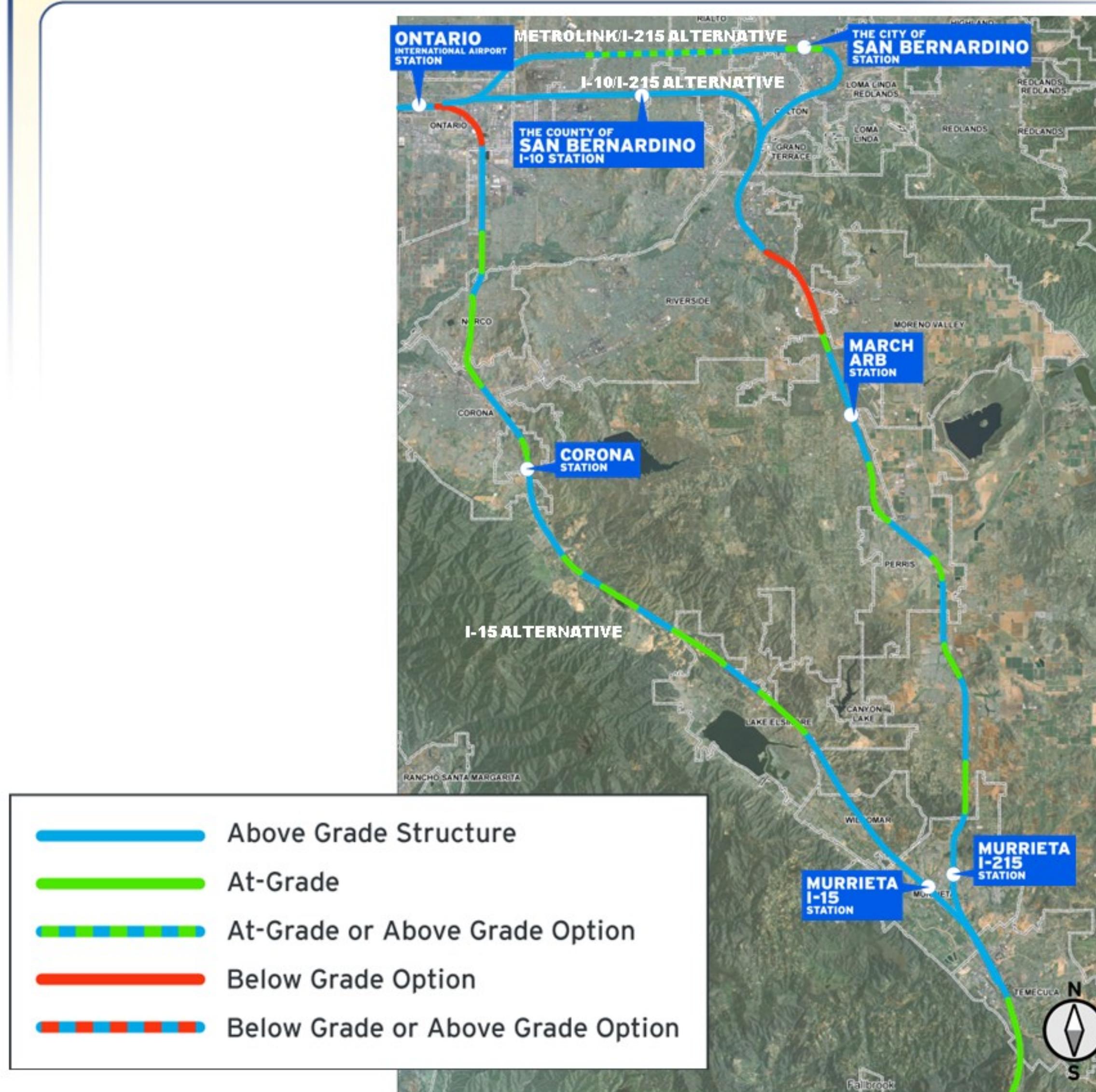
RIVERSIDE MLK Boulevard Station

- Highly constrained due to topography
- High visual impacts to surrounding residential areas
- Local authorities support station at March ARB



SUBSECTION 2

Ontario International Airport to Murrieta/Temecula



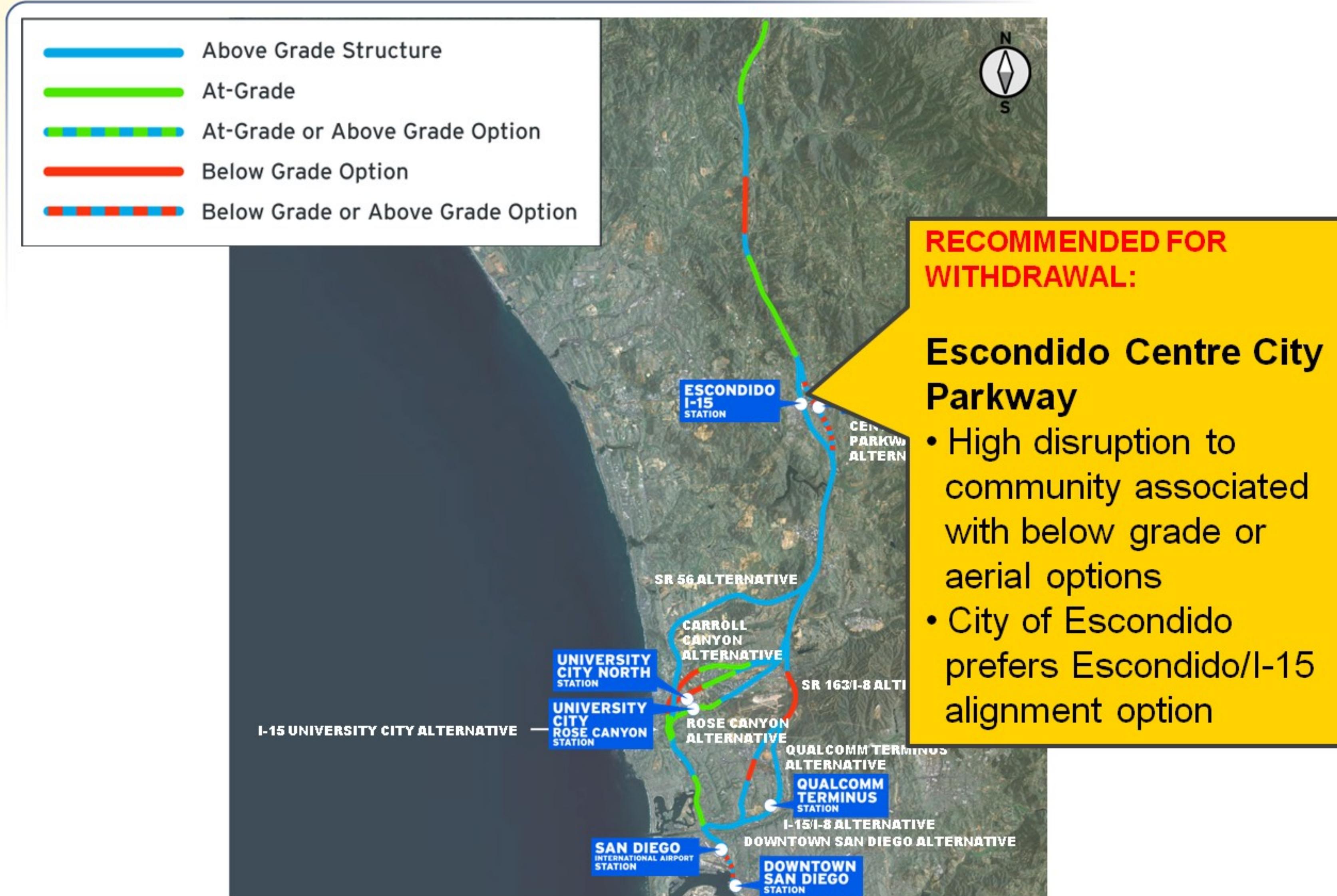
SUBSECTION 3

Murrieta/Temecula to San Diego



SUBSECTION 3

Murrieta/Temecula to San Diego



SUBSECTION 3

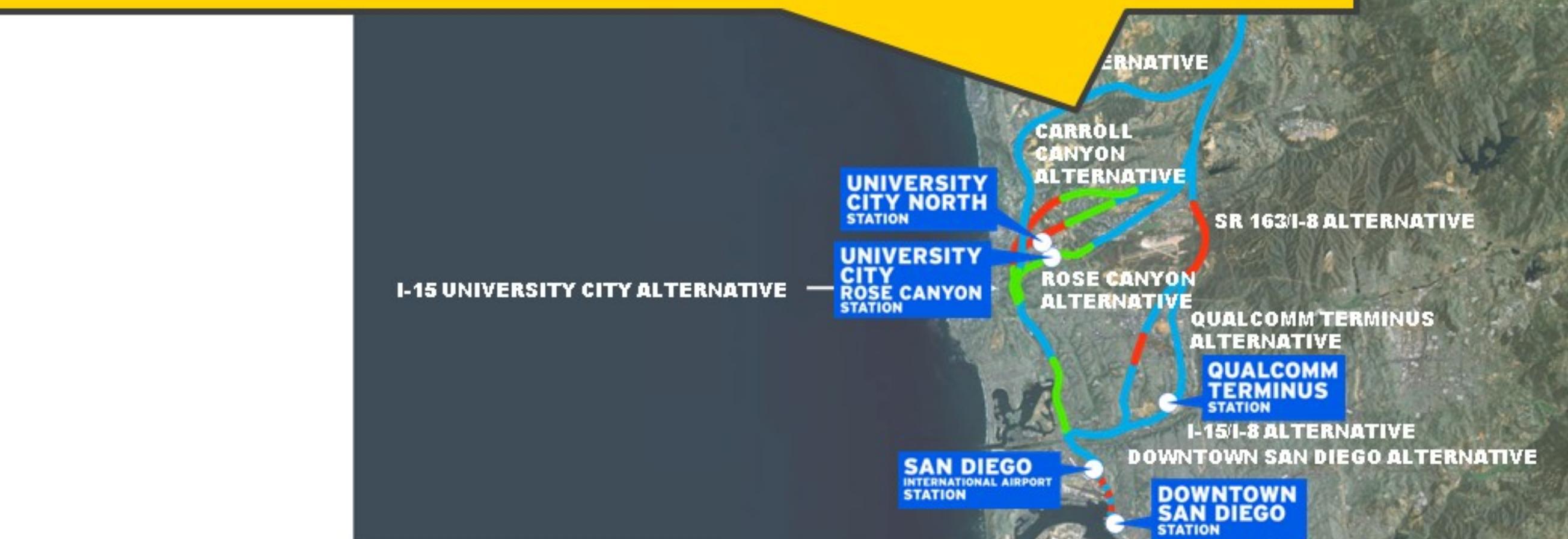
Murrieta/Temecula to San Diego



RECOMMENDED FOR WITHDRAWAL:

SR 56

- Highest impact of natural resources
- Highest displacement of residential uses
- Extensive impacts to aquatic resources
- Impacts to vernal pools
- Impacts to USFWS trust lands
- Impacts on protected open space/preserves (MSCP lands)
- Lower design speeds affect HST operations



SUBSECTION 3

Murrieta/Temecula to San Diego



SUBSECTION 3

Murrieta/Temecula to San Diego



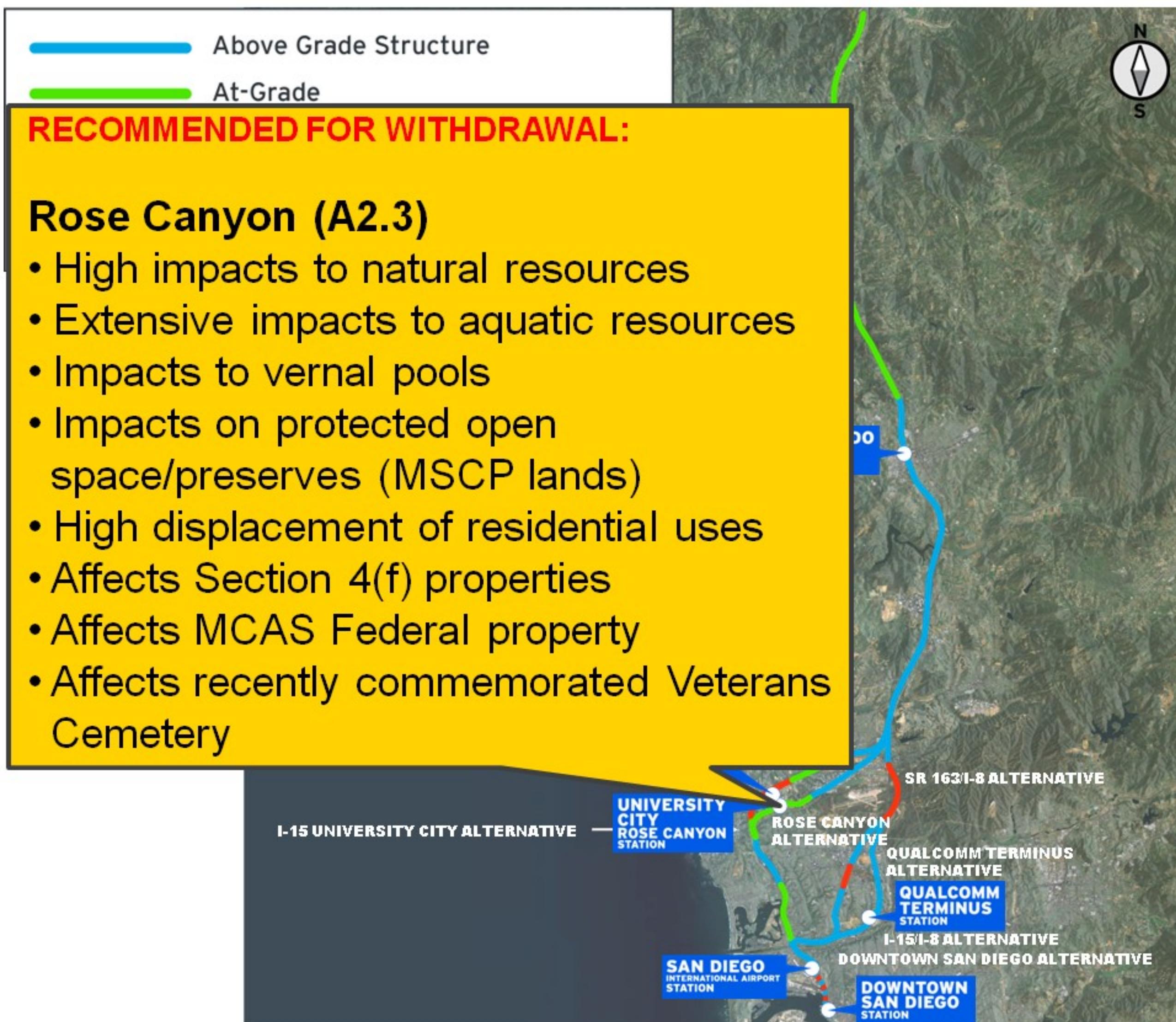
Above Grade Structure

At-Grade

RECOMMENDED FOR WITHDRAWAL:

Rose Canyon (A2.3)

- High impacts to natural resources
- Extensive impacts to aquatic resources
- Impacts to vernal pools
- Impacts on protected open space/preserves (MSCP lands)
- High displacement of residential uses
- Affects Section 4(f) properties
- Affects MCAS Federal property
- Affects recently commemorated Veterans Cemetery



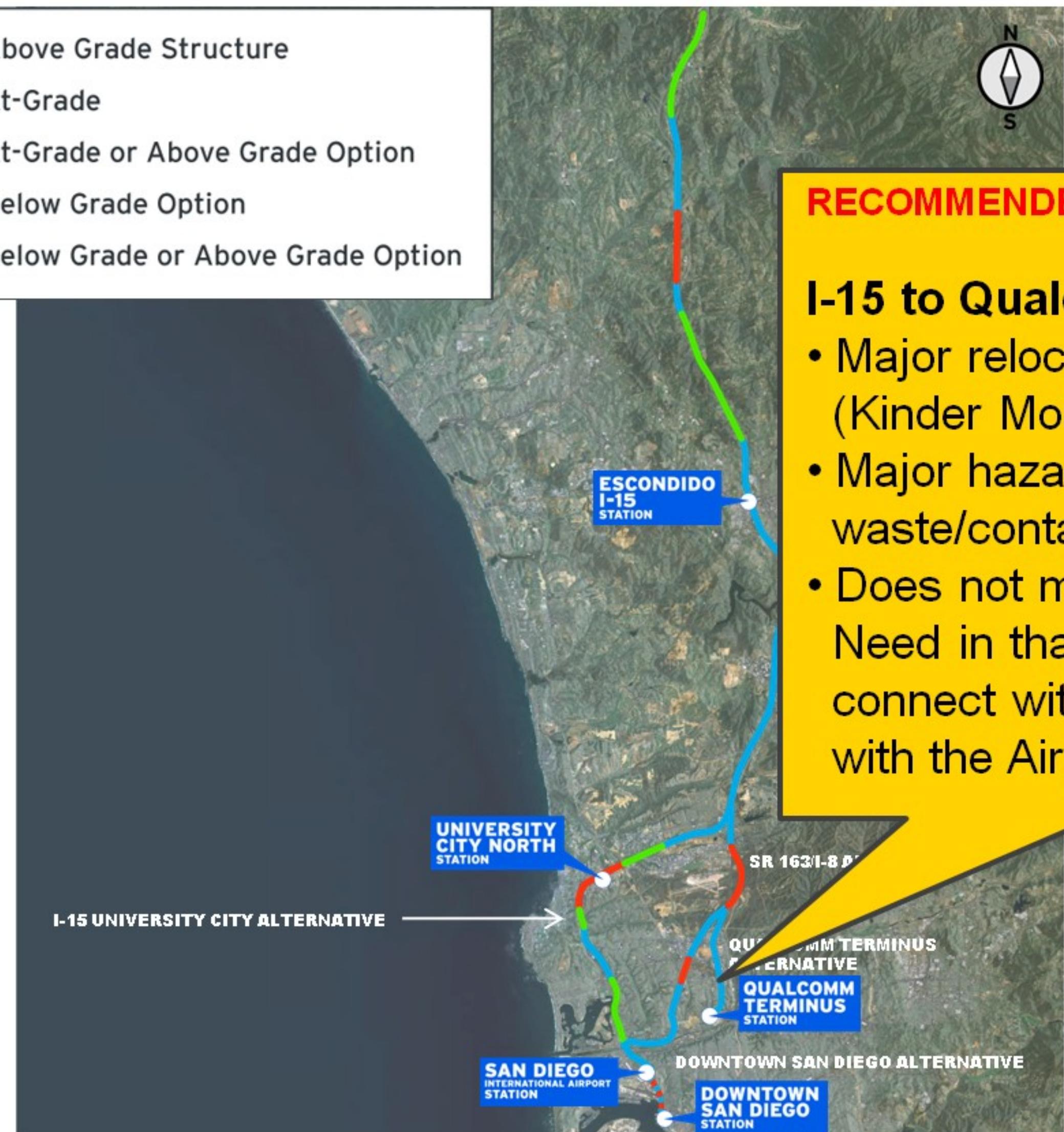
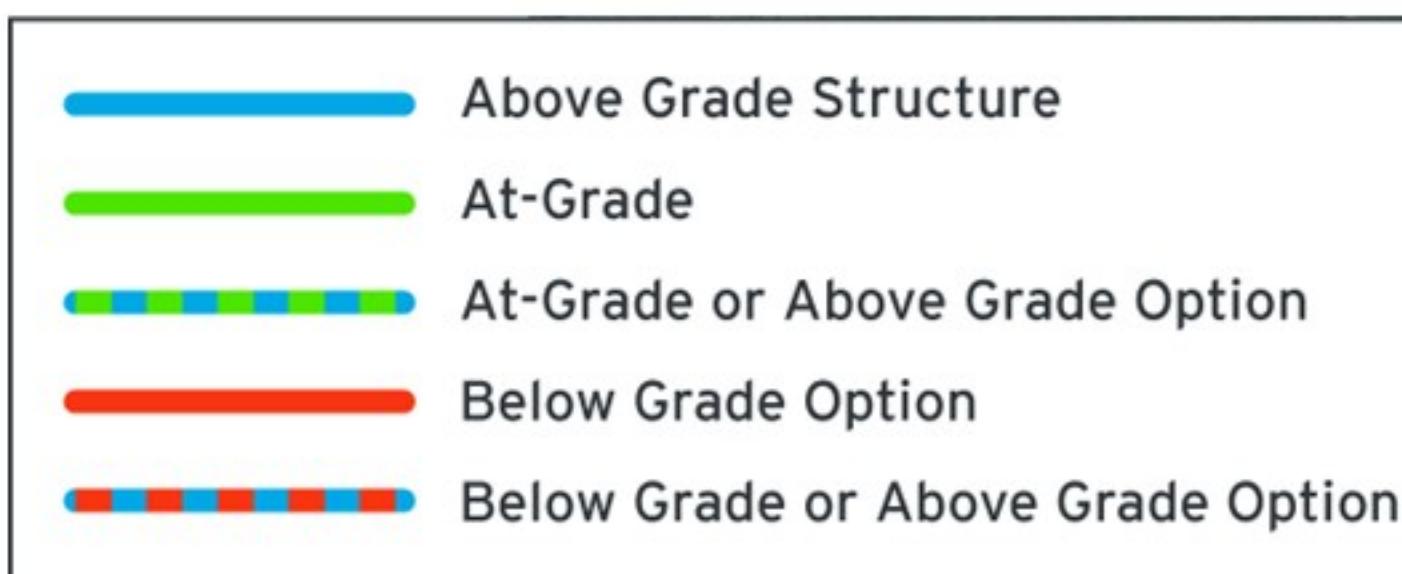
SUBSECTION 3

Murrieta/Temecula to San Diego



SUBSECTION 3

Murrieta/Temecula to San Diego



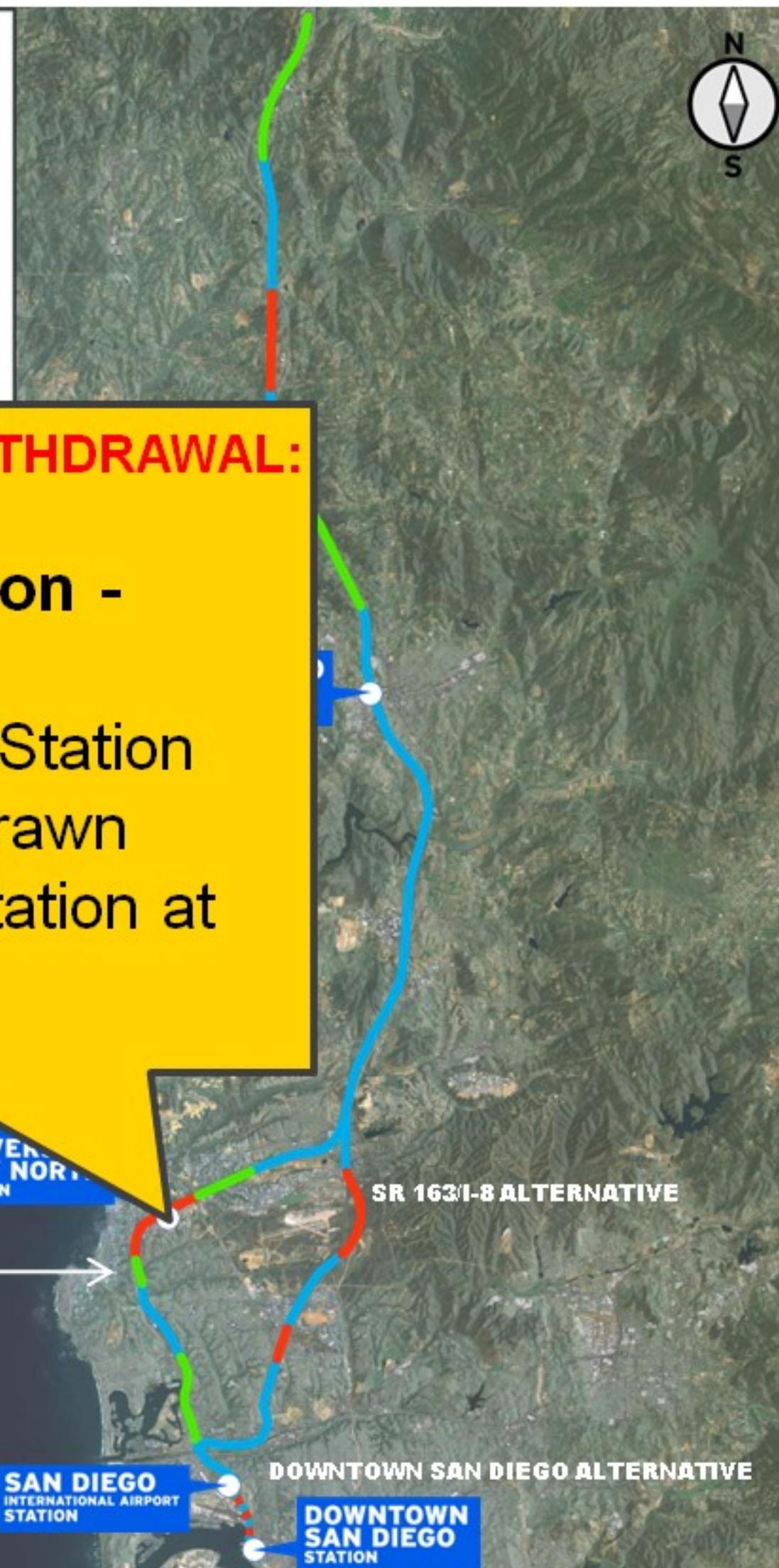
RECOMMENDED FOR WITHDRAWAL:

I-15 to Qualcomm Terminus

- Major relocation of utilities (Kinder Morgan Tank Farm)
- Major hazardous waste/contamination site
- Does not meet Purpose and Need in that it does not connect with Downtown nor with the Airport

SUBSECTION 3

Murrieta/Temecula to San Diego



RECOMMENDED FOR WITHDRAWAL:

University City Station - North Option

- Deep Underground Station
- SANDAG has withdrawn support for a HST station at this location

SUBSECTION 3

Murrieta/Temecula to San Diego



- Above Grade Structure
- At-Grade
- At-Grade or Above Grade
- Below Grade Option
- Below Grade or Above Grade

RECOMMENDED FOR WITHDRAWAL:

Downtown San Diego Alignment and Station Option

- Impacts to downtown waterfront development
- Impacts Santa Fe Depot, listed on the National Register of Historic Resources
- Conflicts with planned development (north Embarcadero Redevelopment Plan)
- Substantive disruption impacts to existing rail operations
- High visual and traffic impacts
- Local agencies prefer SDIA option

I-15 UNIVERSITY CITY



SUBSECTION 3

Murrieta/Temecula to San Diego



SUMMARY OF PRELIMINARY ALTERNATIVES ANALYSIS RESULTS



- Reduced 500 miles of Alternatives Alignments and design options to 290 miles (corridor length 170 miles)
- Reduced 24 Station Options to 13
- Recommended withdrawal of alignments for utilizing UPRR ROW or immediately adjacent to UPRR
- Concluded a variety of Alternative Alignments will allow for meeting the 1 hour 20 minute express run-time requirement
- Recommended that San Diego International Airport is an appropriate terminus for the HST system

MORE ANALYSIS NEEDED



Continued review of these areas:

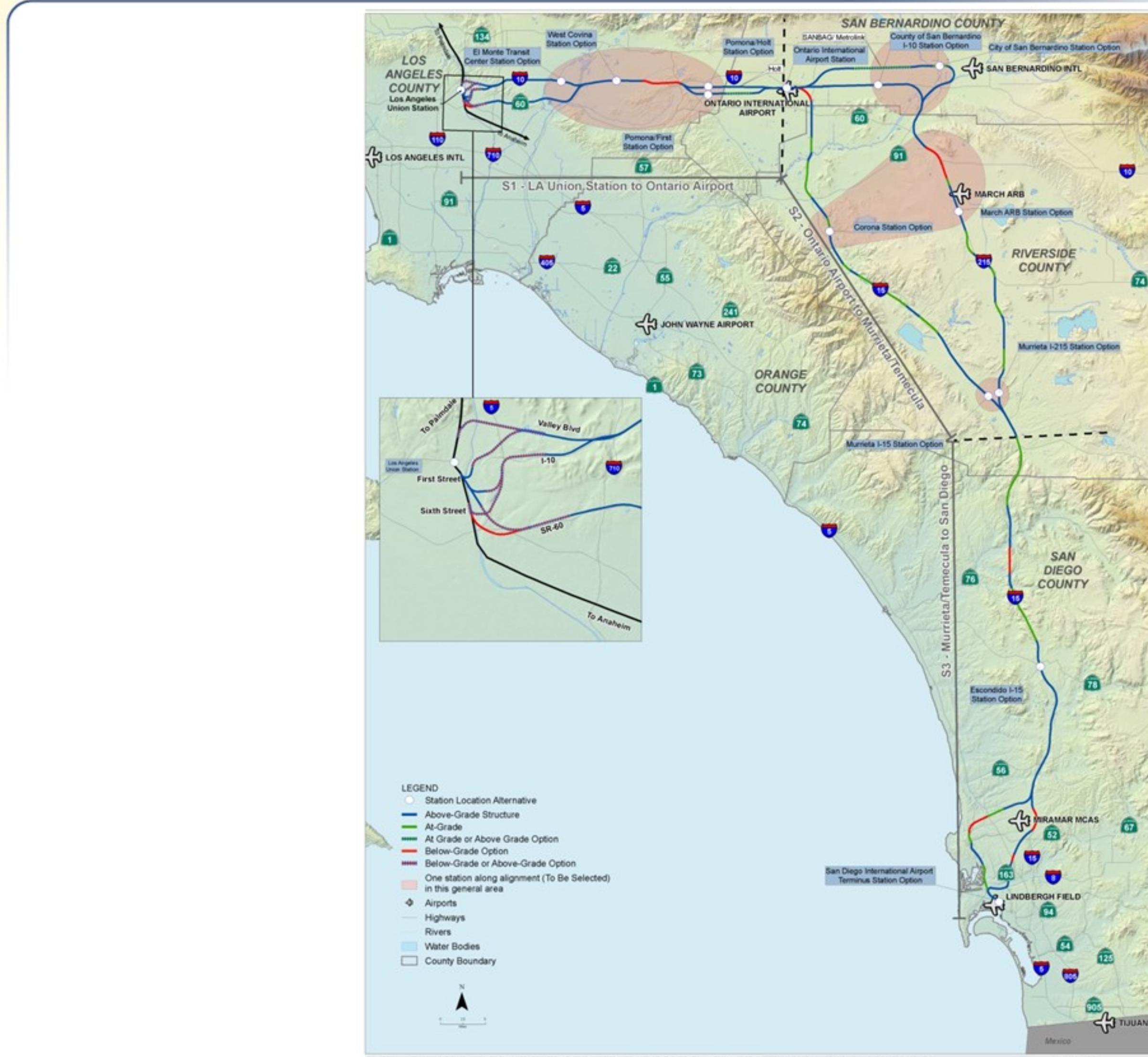
- **LAUS connections (Los Angeles County)**

Ensuring connectivity with other HST sections

- **I-10 and SR 60 (Los Angeles County)**
- **Holt and First Street/State Street (Los Angeles and San Bernardino Counties)**
- **Metrolink San Bernardino and I-10 (San Bernardino County)**
- **I-15 and I-215 (Riverside County)**
- **LOSSAN and SR 163 (San Diego County)**

- Investigate vertical profiles in areas voicing concern
- Ridership evaluation
- Compare relative costs
- Confirm operational effectiveness
- Confirm compatibility of HST with other proposed transportation projects
- Relative environmental impacts

ALIGNMENTS AND STATIONS RECOMMENDED TO BE CARRIED FORWARD



TIMELINE, NEXT STEPS & PUBLIC COMMENT OPPORTUNITIES

